

Break

Wanted

The great £9 million Microelectronics in Education programme is about to get under way. Or rather it might, with luck, get under way in September. Through more likely it will be the New Year.

Anyway, this week they advertised for a Director (salary £13,282 to £16,726, subject to annual review). Applicants should write to the Council for Educational Technology. But in fact the CET are offering only pay and rations for the project.

The planning of the programme is entirely in the hands of the Department of Education—which may explain why things are progressing somewhat leisurely (wasn't it Peter Newsam who described the DES as having the brakes of a juggernaut and the engine of a lawn mower?).

New readers should know that the mighty micro project goes back to the last Labour government, which announced a £12m project over five years for developing teaching about microelectronics in schools and colleges as a small part of a great government push on micro in industry. The election intervened, and senior Tory ministers hostile to government intervention, spending, education, etc. made it difficult to revive the education bit of the package on its own.

However, enough people were convinced of its importance to keep up the pressure, and on March 4 this year the DES announced that they had managed to corner £9 million over four years for a microelectronics in education project.

By the time they had got the money, and with some thinking done in connection with the Labour initiative, you would have thought the DES might have worked out the kind of programme they wanted, and have been able to advertise for a director without too much delay. But already three months have elapsed.

Now it will be a scramble to appoint someone before the summer holidays—always provided a suitable candidate turns up on the first travel—and it is highly unlikely any good contender could get away from his present job before the new year. Mr John Hedger, the DES man in charge says hopefully that perhaps employers might consider the job important enough to release someone quickly.

Considering the DES itself did not consider the job important enough to pressure through the planning of the project and get on with the appointment, it is a faint hope. (The details they have decided are still apparently secret.) Now whoever is appointed is going to have to spend £1 million—the amount allocated for this financial year—at top speed.

Meanwhile, the field is wide open for anyone with a knowledge of education, microelectronics and industry. Nobody seems to know quite where to start looking. "Per-who doesn't exist," says Mr Hedger.

Veterans in the computer education field are crossing their fingers and hoping they will strike as lucky as last time. The only similar project was the £21 million National Development Programme in Computer-Assisted Learning. That time they boldly gave the job to an unproven young unknown from the BBC educational backwash. Mr Richard Hopper is now director of Prestel.

Athens tangle



Tom Howarth

"I'd decided to retire—to set myself up in London as a minor man of letters," Tom Howarth said. And then a telephone call came out of the blue.

Long-term readers of this newspaper will certainly remember Mr Howarth, not only as a man of letters, but also as the witliest and most acerbic of defenders of selection and independence in education. He was head of King Edward's in Birmingham, second master at Winchester and, for 11 years, head of St Paul's in London before going, in true major public school style, to be Senior Tutor at Magdalene College, Cambridge. He was also Montgomery's ADC in the war, and is the author of several books. He has now reached 65, and retirement age.

The telephone call came from Athens. Would Mr Howarth like to be head of Campion School? "My immediate reaction was to say 'No'. But then I went for a walk... slight stirring of the blood... buck into the saddle..."

So Mr Howarth is off in October, for at least two years, to take over what he describes as "the most ungenerously English school in Athens—modern Greek is on the curriculum, but lessons in it are conducted in English." Campion has grown enormously in the past five years, from a handful of pupils to 800 13- to 18-year-olds, 400 prep school children and 180 in the kindergarten, altogether representing 80 nationalities. Mr Howarth says tactfully that he has been called in to sort out a few growing pains.

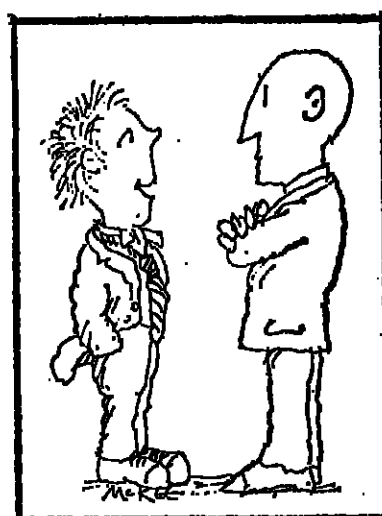
But it is not quite as simple as that. The previous head of Campion, and the man who built it up to its present size, was Jack "Boss" Meyer, the founder of the enormously expensive Millfield School. This spring, Mr Meyer resigned in a blaze of fury against his American board of governors, who had hired a teacher without consulting him. He was resentful about why the teacher was dismissed, but said it had something to do with the Greek tax laws.

"I don't work for people who don't let me see the terms. At this school, I am the Rajah," Mr Meyer is on record as saying. And there's a further complication. Recently, the school had re-elected its President of the school, handing over the Headmastership to a young

favourite, Mr Edward Carrick, who had the nerve to answer back when Mr Meyer told him sociology was a "hogwash subject".

Tom Howarth is going to be Headmaster. "I don't like fancy titles," he says. "Mr Carrick has been carrying on manfully, and I hope he will stay on in a useful capacity."

The Campion governors, in trading in the boss for the Don, have certainly bought themselves a more urbane and elegant style. And Mr Howarth is clearly planning to enjoy his last ride. "I saw a school production of *A Midsummer Night's Dream* in a wood near Athens. It had plenty of vitality, but could have been better controlled..."



Mother says she'll buy me some school books as soon as I've been taught to read.

Boisterous Boyson

Rhodes Boyson was in rip-roaring form when he addressed the Association of Polytechnic Teachers last week. Here are just three of his many translations of the text of his speech, as drafted by civil servants.

Civil Servants: "... accused in some quarters of abandoning the Robbins principle. I for one do not accept that this ever meant that every intending student has a right to a place at a particular institution or on a particular course." Boyson: "Robbins never was a guarantee of an ego-trip..."

Civil Servants: "... capped Advanced Further Education ... powers in Education Act ... set pool at £375 million determined that it should be apportioned by reference to a formula."

Boyson: "An uncapped pool formula for financial diarrhoea." Civil Servants: "... means short-term and their comings—I openly admit them to be justified..."

Boyson: "It's only a very and ready formula but the logic is too flaming bad. It's water the bridge. Don't give me bellyaching. I hope you'll be my brutal aggressive cheerleader."

When it came to the valid courses, Boyson did rush for the prepared text word for word. But he started: "I don't understand anything about it."

Treasury interest

If money for primary schools to have been in especially supply, I can now offer an explanation. The last time in the Treasury or Cabinet took an interest in the report on primary education have been in November 1972.

At least that's the last time one borrowed the Treasury Cabinet office library or found in a Camden Council, this week. It had been there together with a lot of government clackstubs for to sell for 5p in the local market.

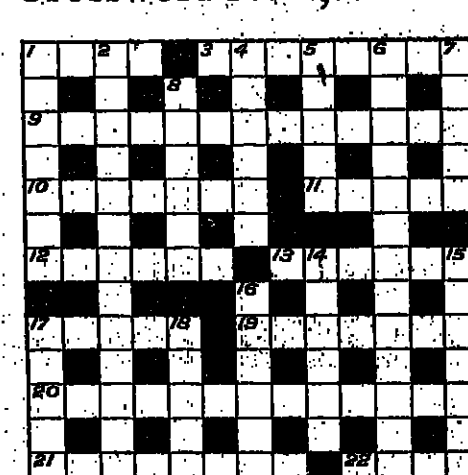
Next week

■ Vincent Rogers on Nall Poon new book, *Teaching as a Creative Activity*. ■ Pressure groups: Rogers on the Campaign for Advancement of State Education. ■ Leonard Schapiro reviews history of the Russian Revolution. ■ Thomas Mann's *The Magic Mountain* reassessed.

Next competition

Competition No. 4. Set by Sylvia. Regrettably few of our estimable poets have written verse for a drive. How do you think Mr Gerard Manley Hopkins or Thomas would have dealt with subject matter of one of Milne's poems in *When We Were Young*? Up to 12 poems. The document will set out in please, by June 18.

Crossword No 1,190



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- 21 They are not limited to hollands or holland (8).
- 22 Aversive ones (4).

TES Literary competition

Competition No. 3

The task here was to compose a free verse poem recognisably Lawrentian in forthrightness, pugnacity and, if possible, eloquence—though not necessarily Lawrentian in attitude. The mare to avoid was producing a piece which was a too obvious rewrite of a well-known existing model.

Among the winners, Roger Addison's *Warthog* has obvious echoes in theme and structure of *Snakes*; but has quite sufficient wit and fancy of its own not to be overshadowed by that most famous of all Lawrence's free-verse pieces.

A word on relevance. Some competitors appear to have despatched to us the entire contents of their poetry bottom-drawer irrespective of the suitability of their poems to this particular competition. Much of this work made engaging and sometimes arresting reading, but remember a 30-line poem in heroic couplets on the life and character of Alexander the Great is unlikely, in the very nature of things, to carry off a prize in a competition requiring no more than 16 lines of free verse on a contemporary theme.

From a large enthusiastic entry, I have, not without difficulty, selected five winners. Seven poems to each of them; and commendations to Philip Cavendish, Basil Rannette-Hawes, Mick Madden, John Killick, Neville Melton, and Andrew Wren, T. W. R. Foot and Bill Greenwell.

ANT
An ant was crawling up my
As I sat on my chair in the hot,<
buzzing time of the afternoon;

And when I saw his strides towards
his objective
(Who knows what great objective a
tiny ant may set himself?)
I thought "In a thousand thousand
years
You, little ant, and that oleander
Will be coal, or oil, or gas, waiting
perhaps for a man
(If there are men in a thousand
thousand years)
To draw you out and burn you to
leisure
And civilization and, above all,
leisure
So that he may sit in his chair in
the hot, buzzing time of the
afternoon
And watch an ant crawling up his
oleander."

Paul Griffin
MUSHROOM
Yesterday I entered the gas
cupboard
Inserted my coin into the metal's
fissure.
A strange organic smell filled my
nostrils then.
I reached for my torch
And searched and searched about in
the darkness until I discovered
it.
I switched it on and pointed it
where my nose sought the
source of living matter.
There, there in the corner a single
mushroom emerging from the
foundation depths
And this was to be my shelter
You fool, what futility of intention,
What arrogance,
To think you could escape the
Apocalypse, the divine Judgement
of mankind,
I could not exit the mushroom, it
must remain to serve its purpose.
As I must remain to serve mine.
Marjorie Winter

PRIMITIVE
I wish I had lived
In the days of those wandering
nurskull tribes
With their primitive few
possessions,
Axe head,

WARHOG
Encamped at Tsavo between the
blue, blue African sky and the
red, red African earth,
Breakfasting under the wide,
mothering Baobab tree,
Suddenly,
In the middle distance,
Below the blue, blue African sky
and above the red, red African
earth,
I saw
Him.
Tall proud, cocky; sad face, tusked
and whiskered—
A warthog!
And me eating bacon.
And I felt a kinship, an ancestral
bond between us, and, for joy,
An lambic twitch of his tail, a
dactylic stot of his feet, and he
shot antepastorally into the
bundu.
And I knew between the blue, blue
African sky and the red, red African
earth,
I had met my match.
I, a drivelling, prosing bore, had
met one of nature's true poets:
A metrical boar.
Roger Addison

ANNIVERSARY
Me, erect in my concrete block
while the years
my odd-bod love-words have been
stitching

Stone quern
And lovingly clumsily decorated
Whose fragments the archaeologist
found deep
Under the downs near the car-park
and the ice-cream kiosk.
I should have lived then
Because then I wouldn't be in
danger of being buried
Beneath an inexorably deepening
layer of
Hygienically plastic-wrapped tech-
nological disposables
Instant Kentucky-fried take-away
Moulded-polyurethane-cartoned
Non-biodegradable
Filth.
Joan Evans

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stitching

down from the shelves,
into a thousand dissertations.
And how do these scurlet PhDs
really see us—
the Doctor of Philandery and his
eternal Frieda?
How many Professors have raised a
reputation
On the soft fancies which our lips
engendered?
We fulfil their foot-noises.
We lie together in their biblio-
graphies.
And do we stir
Their loins?
R. A. Malden

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Muscle man on stand-by for Moscow

In the week when Mrs Thatcher repeated her call to athletes to stay away from the Olympics, it is still in the balance whether Andy Dziewiecki, games master at St Michael's junior school, Camden, London, will be flexing his muscles in Moscow this summer, despite the people of Camden having raised £1,000 to send him. Andy, British and Commonwealth weightlifting champion, heavyweight class, who qualified for teaching at St Mary's, Twickenham, was picked for the Olympic team but appeals so far have raised only enough to send six out of the 10 selected and Andy is on the provisional list.

"The trouble is that all money raised has to go into the central pool. But I have asked the British Olympic committee if the money raised by Camden could be used to ensure I get there. I expect to know in about a fortnight."

This week

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Classified 29

Labour to attack private system by cash squeeze

Labour's plans to put the squeeze on private schools are nearing completion. The aim is to weaken them financially until they have little choice but to cooperate with the state system. Foreign-based diplomats and armed

forces officers would also lose the allowances for educating their children privately. Mr Mark Carlisle, Education Secretary, has called the plans vindictive, vicious and stupid. Biddy Passmore reports.

Aim is to weaken schools into submission

Labour's consultative document on private schools, due to be completed by the party's education committee next Monday, will not mention the former policy of subsidising all fee-paying in schools. Instead, the document will set out in detail the new policy of attacking private schools from within.

The working group which has drawn up the proposals seems to have moved away from outlawing private schools into public ownership. It would also be likely to suggest that every intending student has a right to a place at a particular institution or on a particular course.

A new option which has already been drawn from the proposals is to charge a public school pupils full costs at university, ruling out fees at £2,000 and £5,000 a year. This is a much more draconian suggestion than the idea of floated before that such pupils should simply be denied grants.

However, parents would be given a simple warning—five or six years' notice—of the change so that those with children already in private secondary schools would not be affected. News of the suggestion has predictably outraged those who have described it as "sheer stark impudence" and "ludicrous". At Question Time in the Commons this week Mr Mark Carlisle, Education Secretary, was stung by a vicious attack by the Liberal Party. He said: "It is extraordinary, he said, to advocate in the same week that American students should not have to pay full cost fees and that British children of parents who have paid their rates and taxes should."

Another option which has emerged is a surcharge on private schools to refund the state for the cost of training their teachers. It has not yet been decided whether the cost of a degree before post-graduate training should be taken into account in calculating the amount.

One of the biggest public subsidies to private schools—the allowances which enable diplomats and officers in the armed forces serving abroad to send their children abroad—would no longer be allowed under the working group's proposals. Parents stationed abroad would either have to use the local schools or send their children to state boarding schools in this country, some of which would develop out of existing private schools.

The old commitment to end the charitable status of the independent schools which has appeared in successive Labour manifestos but never been implemented will be given a new twist to suit the new policy of partnership. The law on charities will be changed to bring it in line with the recommendation of the 1975 Select Committee Report, which said that charities should be of benefit to the whole community.

The withdrawal of subsidies will be selective, a Labour Party spokesman said this week. "This is not a simple policy of hamstringing the private schools. We are trying to change the relationship between the public and private sector—but in a very different way to the Conservative Party with its assisted places scheme."

School holds out on union recognition

by Richard Garner

A two-year battle for union recognition by women domestic workers at an independent school is still unresolved in spite of a recommendation from the government-backed arbitration service, ACAS, in their favour.

The General and Municipal Workers' Union, which represents the women, has written an open letter to Prime Minister Mrs Margaret Thatcher protesting that the finding is not binding on the school.

The battle started when women employed by the Royal Russell School in Coombe Road, Croydon, joined the union and went on strike for five weeks in protest over their pay—said by the union to have been between 57p and 65p an hour. They eventually returned to work for a pay increase which had been on offer before the strike on the understanding that the school would cooperate with ACAS, which would rule on whether they should have the right to trade union recognition.

According to the ACAS report, 19 of the 41 employees who replied to their questionnaire were members of the union and 20 said they wanted their pay to be determined by collective bargaining through the union. In all, there were 47 employees.

The report adds: "In view of the degree of membership and support achieved by the union which was developed in adverse circumstances we believe that it is in the interests of the school to accept the union as a bargaining partner for the introduction of free collective bargaining."

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The plans which Mr Neil Kinnock and Mrs Caroline Benn are cooking up for the public schools are aimed at their destruction as elite social institutions. They jib at outright abolition, however. Instead they envisage death by a thousand cuts.

"Willing to wound and yet afraid to strike", they correctly assess the obstacles in the way of outright abolition. These include the immediate political difficulties which might be raised even by members of the Labour Party on elementary libertarian grounds, questions about the political wisdom of taking on the Churches. Faced with the secularization of society, the Churches would be bound to oppose a general legal prohibition of the supply of education by anyone but the state. And in the background, of course, there would remain the European Court of Human Rights: maybe the next Labour Government will quickly liquidate its European links, but its liberal supporters would be appalled if this meant withdrawing from conventions on universal human rights which would seem clearly to protect the right to make private arrangements for education.

A policy of controlled frightfulness towards the independent schools looks easier to push through, because it is made up of a series of measures, none of which, by itself, would be fatal but which would together contrive in time to put the schools out of business. The trouble with this is that it is messy. It takes time (which ensures a prolonged period of controversy) and enables the Opposition to make the usual promises of restitution. Given the frail hold which either party has on the long-term support of the electors, Mr Kinnock's policy of cumulative irritation may well prove politically distracting without bringing about a lasting change. Labour is still confronted by the general truth that it cannot do much about the public schools in a single Parliament.

The measures put forward for discussion are a mixture of the reasonable and the unreasonable. It cannot be said to be unreasonable to restrict the rate and tax benefits which independent schools now get as charities. This has long been the stated policy of the Labour party. Repeated failure to carry it out suggests that there are real practical difficulties, but it is hard to argue for the continua-



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Labour's assault on the public schools: messy and vindictive

tion of these charitable privileges. The change would not make much direct difference to the schools; indirectly it would.

The effect of stopping public money going into the schools via the diplomatic service and the Armed Forces would be damaging to many boarding schools (though not necessarily as damaging as the authors suppose). It would certainly increase the proportion of overseas students brought in to help pay the bills. It would also be likely to have a damaging effect on foreign office and service recruitment.

Attempts to get at the public schools by forcing their alumni to pay full fees at the universities or depriving them of any eligibility for grants would be altogether more vindictive. It is argued that the independent schools get a disproportionate number of their former pupils into higher education: in other words that by "buying" superior secondary education, parents can qualify their offspring for more than their share of the subsidized benefits of higher education. Why not, instead, insist on a clear-cut choice: free all the way or pay all the way, but no combination of the two with a switch at 11 or 16 or 18 plus?

There are some powerful contrary arguments to a crude application of this intelligible but not compelling principle, at the university level. Apart from anything else, it would punish the student for a social offence deemed to have been

committed by his or her parents. It is bad enough in many people's eyes to base the student grant on the parent's income even though the student is of age. To carry a vendetta against the parent to the point of permanently damaging the student's life-chances would strike many people as grossly unfair. And again, it would take time to complete and court reversal by the forces of electoral change.

Other suggestions include finding some way of charging the private schools for the cost of the higher education and training received by their staff. A case for such a levy could be made out in respect of postgraduate teacher training (though, unless forced to abide by the "qualified teacher" rules, the independent schools could probably dispense fairly cheerfully with the PGCE). Of course, the independent schools would expect to charge the Government for any teaching practice places they provided. As to the costs incurred in providing first degrees to students who went on to teach in the private sector, how would these differ in principle from the costs incurred by all other graduates entering the other professions or private industry?

Mr Kinnock's committee has also gone on to consider the uses to which disused private schools could be put, apparently believing that positive proposals must be put forward if the scheme is to carry conviction. This seems an absurd tactical error: it only provides another set of suggestions to argue about. Viewed as

disused real estate, the private school can be diverted to other purposes, pulled down and (if suitably located) redeveloped. If, on the other hand, it is assumed that they must continue to be used for education within the maintenance system, it is easy to take off into a cloud cuckoo land where Eton becomes a nursery school and Manchester Grammar School is converted to an adult education centre, notwithstanding the surplus school buildings thrown up by falling rolls. To find suitable things for Eton to do with these premises it is necessary to imagine a rapidly expanding education system with unlimited funds for development—a state of affairs which the Government in recent years, Labour or Conservative, has inherited or successfully created.

Mr Kinnock and his friends are, in effect, asking for the sincerity of the proposals to be measured by the probability of carrying through the positive side of the policy as well as the negative. Labour will have its work cut out to convince people that they are sincere in this: the developmental expenditure which they envisage will need to be closely scrutinized, as will the opportunity cost of spending money on this rather than on more immediately necessary improvements to the maintained system.

In the end, the merits of the Kinnock proposals can only be judged ideologically: either you believe that the public schools must at all costs be destroyed in the interests of social peace and justice or you do not. If you do believe this, then Mr Kinnock is offering a messy and mean-minded set of tactics, which would probably succeed if carried through consistently for a prolonged period of time. If you think that it could be a liberal and anti-libertarian to kill off independent schools by indirect tactics as to assault them head on, then you will oppose these measures—even those which are not intrinsically unreasonable. The independent schools, themselves, can expect a further prolongation of the controversial fate as Labour's educational enemy number one. They will have to learn to live with evermore explicit threats. It can only be bad for their point of view that they will now become more and more heavily dependent on Conservative good will.

Northern Ireland set for even-plus style exam

Paul McGill

Northern Ireland is to return to a system of formal tests similar to the old 11-plus. Lord Elton, the Secretary of State responsible for education, announced this week after a visit to the three biggest schools in the north.

In the past three years, primary schools have graded children according to their suitability for grammar schools. Tests were taken anonymously to allow the Department of Education to compare standards and grades to each primary school.

Each year the system caused a great deal of controversy. The Teachers' Union decided it would not cooperate with a system which it regarded as a slur on the 11-plus. The newly formed National Association of Head Teachers and the five education and library authorities agreed in principle to return to the old system, though they disagreed on details.

The Department of Education issued a discussion paper in March, which argued for the retention of the present system, but claimed the procedure could not be operated satisfactorily without cooperation from the schools.

It warned that without a suitable system, the Government would have to return to testing. The new system has been agreed but would likely be a two verbal reasoning tests, not certainly there will be no

strict pass/fail distinction, but pupils will be graded P, R and S, as they were this year. P is likely to cover the top 20 per cent, with grade R taking in about the next 10 or 15 per cent. Children with the top grade will be guaranteed grammar school places. Primary schools will have a say in selecting pupils with grade R though the final decision will remain with secondary schools.

The Ulster Teachers' Union and the NAHT welcomed the announcement, but the two biggest unions, the Irish National Teachers' Organisation and the National Association of Schoolmasters/Union of Women Teachers, opposed it.

The INTO boycotted the meeting and condemned the switch in policy. It said that selection at the age of 11 is impossible and claimed that comprehensive education is the only solution.

The same line was taken by several political groups, including the Social Democratic and Labour Party, the Alliance Party, the Northern Ireland Labour Party and by the Irish Congress of Trade Unions.

The NAS/UNT favoured the present transfer system and claimed that formal tests would put more pressure on children. It would agree to operate a formal system only under duress because it wanted it to work as early as possible.

All the unions emphasized the need to protect the intakes to secondary intermediate schools which have suffered from the declining number of 11-year-olds and the informal procedure used by grammar schools to boost recruitment.

Race body report calls for education shake-up

Diane Spencer

After reorganisation of the Commission for Racial Equality's education department is being proposed, a report by the commission's executive committee has called for a shake-up of the education system.

Peter Tucker, criticized the education department at the commission's annual conference in April, which was part of the CRE's campaign to bring about a shake-up of the education system.

Mr Tucker said that although the education department was no longer a separate body, it was still a better race relations in the education system.

The conference was boycotted by 20 delegates, including Mr. Peter Tucker, chairman of the education department, because of the way the conference was run.

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is just one of a number of departments in a large section including youth and social services.

Mr Tucker said: "We feel that education is important enough to be a group on its own with a senior head."

If this came about it would mean that Mr. Lashley, also the senior officer of the education department, would be superseded.

Mr. Tucker added that although the education department was no longer a separate body, it was still a better race relations in the education system.

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Supplies of Meccano for school technology courses will not be interrupted by the present difficulties facing the manufacturers, Airfix. Kits, including those for the Schools Council control technology courses, have been made available for schools through a Sheffield distributor, Economics Ltd, 26 Wilkington Street, Sheffield. The Director of the National Centre for School Technology, Mr Geoffrey Shillito, said he was delighted supplies would continue just when the importance of developing design and engineering skills was starting to be recognised. Meccano is used in technology courses for building various mechanisms and problem-solving prototypes.

Council likely to lose case on fee rises

A council that put up tuition fees for about 1,000 overseas students midway through the academic year seems likely to lose a series of test cases in the courts. The students are demanding their money back.

After receiving a Government circular calling for foreign students to pay full cost fees, Brent council increased the fees by between £40 and £170. The students refused to pay up, but then accepted the council's suggestion to pay the surcharges into an independent fund while the courts decided.

Brent's action was in direct breach of advice from the Council of Local Education Authorities which said fees should go up at the start of the new academic year, and that students already on courses should be exempt.

Mr. Neil Kinnock, Opposition Spokesman on Education, said the policy of full cost fees would turn Britain into "a higher education Hilton". Annual fees of between £2,000 and £5,000 a year in this country should be compared with fees chargeable in Ivy League universities in America where £2,400 a year was the highest, he said.

Education Secretary Mr. Mark Carlslele replied that the three-year undergraduate degree in an English university would remain "an extremely good buy". He welcomed students from abroad, he said, but the present subsidy was arbitrary and open-ended.

London University is to get the largest chunk—£3.75m—of the £5m earmarked by the University Grants Committee to help universities with high numbers of overseas post-graduate students adapt to the new full-cost fee policy.

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Government hand over denied

Claims that the Government was planning to hand over the collection of education statistics to a private enterprise as part of the civil service reorganisation were denied this week by the Department of Education, the cost-cutting task force and the outside organisation supposed to be involved.

Last week, reports in *The Guardian* said that Mrs Thatcher's

special investigator into Government housekeeping, the businessman Sir Derek Raynor, was considering this action. The statistics of the Departments of Health and Social Security, Environment and Education, the Science and Technology, and the Civil Service were supposed to be handed over to the Chartered Institute of Public Finance and Accountancy (CIPFA).

Comment

Wanted: a good pair of gumboots

Mr Mark Carlslele continues his efforts to justify the massive hike taken up on the use of cash raised by parents to pay for essential school materials like books and stationery. Like Carver Doone, the more he turns and turns, the more surely the mire rises above his ankles.

Not but what Mr Kinnock has not managed to do both his attack too: he had to make a point of saying that the schools which refuse to accept the Government's offer of a loan for materials are "not serious" about the education system.

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Inadequate response to this computer age

If anyone has the right to pick the easy target and blame the schools for the alarming shortage of qualified computer personnel, it is the National Economic Development Office (NEDO). This and again during the 70s NEDO working parties issued unambiguous warnings about the widening gap between the needs of the electronics and computer industries and the output of suitably qualified graduates and technicians from the education system.

The latest NEDO report (p5) by consultants from the Institute of Manpower Studies makes depressing reading.

Firms that use computers and people with computer skills are crying out for professional level recruits (programmers, systems analysts, and so on), and even at the lower level of computer operator, often recruited from school or TOPS courses, some parts of the country have plenty of vacancies.

It is inevitable that these shortages will restrict the expansion of precisely those new industries that the country desperately needs both to increase prosperity and create new jobs.

Pupil and student numbers are going to drop heavily for the next decade, and the proportion of sixth formers aiming at a computer-related career will have to increase considerably simply to maintain the present dismal levels of recruitment.

With the exception of firms making computers and computer-based products (the hardware), where the shortage of electronic and production engineers is acute, this is not primarily the familiar problem of maths and science teaching in schools.

Traditionally, the software brigade have been seen to have a school maths or science background, and have graduated in computer science of similar subjects. But there is no need for this to remain a bottleneck. Both

schools and employers must be convinced that, in the words of the report, "given the will and the means, the initial specialist knowledge and skills of computing are relatively easily acquired by many people". An excessive or erroneous demand for credentials is self-defeating.

Employers must start recruiting more arts graduates—they are beginning to like foreign languages—and schools must start teaching with and about computers out of the maths and science department (see Extra p37).

All children need to read and write to survive in today's society. In tomorrow's they will have to be at home with computers, whether or not they consider a career which directly involves a career in computing. The schools cannot complain if society expects them to do something about this: after all, it is part of the major technological revolution of our time. Equally, Ministers and I.E.A.s must not be allowed to shrink at the pleading poverty. That would be the grimmest form of myopia.



Dear Mrs Worthington, don't

The problems bedevilling professional training for the arts, referred to in these columns a few weeks ago, were the subject of an illuminating debate in the Lords last week. The proceedings were initiated by Lord Vailley, who offered cogent arguments in favour of some much-needed rationalisation. Grants for degree-level students of music

and dance, he said, should be mandatory rather than discretionary, and "a small number of top-flight colleges in these fields should be taken into the public sector."

Anticipating protests that such measures might lead to an increase in public expenditure at a time when cuts had become the norm, he argued that the reverse would be true: at present discretion was used to give fairly indiscriminate support to a large number of institutions. Rationalisation, he argued, would bring a further benefit: mediocre students, whose principal qualification was an ability to pay their fees, would be less likely to get drawn in to these cruelly competitive fields.

It was perhaps inevitable that these arguments should fall on stony ground. Lord Vailley, who replied for the Government, said the private schools' bid for financial support would have to be considered in the context of the assisted places scheme, which would in any case not come into operation until September 1981. Lord Mowbray went on to stress the Government's intention to let local authorities continue to exercise discretion about which courses they supported, and he argued that to give performing arts students mandatory grants would be inequitable and also liable to open the flood gates to "comparable" claims from other specialists.

In other words, Mrs Worthington's plea for a change in the way the arts are taught in schools, and the professional prospects of her own programme, remain, as ever, bleak. Lord Bickart, in his usual debate, put the stage dilemma rather more bluntly and, in a way, more accurately: "The arts are going on going on the stage because of unemployment amongst their elders were pursuing a policy which was ultimately suicidal. Did we want a generation of young people who were not only unemployed, but also had no sense of direction, which could offer only a few, while Edgar and Edmund were unobtainable."

No comment

There are 11,500 entries including difficult words in a child's likely to meet, such as the word "psychology" from an advertisement for The Oxford Children's Dictionary.

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Platform

The work of the new Select Committee on Education, Science and Arts is scrutinized by PETER SLOMAN

Advising the experts

I am no historian, but I have always understood that many of the great advances in social policy in the nineteenth century stemmed from a report of a select committee of one or other House of Parliament. Partly because I dreamed of history repeating itself, partly because in a general way I believe in open government and partly for other reasons, I welcomed the announcement that there was to be a new system of Commons select committees and that the committees were to have their own expert advisers.

I remained hopeful, even though experience over the astounding committees on the last three education Bills had been far from promising. It is really depressing to read the proceedings on these last Bills, the more so in committee where one must suppose that the members who know something about the subject will tend to appear and speak. Admittedly the administration of the public education system is pretty muddled, but the debates reveal not only muddle but simple ignorance.

So what of the new Select Committee on Education, Science and Arts? It is, of course, early days yet, but scrutiny of *Hansard* and attendance at some of the meetings are not encouraging. Mr Christopher Price (Lewisham West, Labour), the committee's chairman, has been around the educational scene for a long time, and shows as one would expect, a very good grasp both of his subject and of the techniques of chairmanship. The other members of the committee do not include many of the education experts in the House. One hopes that they are learning, but one can not have much confidence in their recommendations will be wise, far reaching, and forward-looking.

To be fair, members of modern Houses of Commons have to cover a much wider field of public business than their predecessors in the last century. Members may not employ their time very profitably, but no one would deny that they are extremely busy people, and must find it hard to master any particular subject. Moreover, the processes by which they are selected do not put a premium on intellectual stature.

So it would be unrealistic to expect that their contributions would be very profound indeed. Perhaps the theory of social democracy is that members (like indeed elected members in local government) should come from a typical cross-section of men on the Clapham Common. I do not think, therefore, that one should seek to put on the members the blame for any shortcomings which there may be in these committees.

What then can be done to improve performance? No doubt the system of advisers can be further developed, though there have been financial resistances to this. One crucial matter is time. Although one Parliament sits more days a year than those of most of our allies, members simply cannot afford to make this time for more at longer sittings. Two-week half-days, however, nor long for eight people or so to take oral evidence from eight or so other people, even if written evidence is circulated beforehand, and the passing of witnesses from one committee to another and the other before the committee does not make for high productivity.



Mr Christopher Price, the committee chairman.

external presumably—was taken before policy decisions were reached (exemplified in the closure of the Centre for Educational Disadvantage).

These two points are, in fact, only particular aspects of a broader picture, which has indeed been worrying Parliament for many years now. There is now available the Civil Service department's own code of behaviour for civil servants. It is too long to quote, but a fair summary would be that it is progressive and liberal on constitutional principle, but offers little advance on current custom in nitty-gritty practice.

The defence of successive governments to charges of undue secrecy has been supported on three pillars: the doctrine of ministerial responsibility for policies and actions within a single department; that of collective responsibility of Cabinets for the government's policies and actions as a whole; and the danger that, if their advice is to be scrutinized publicly, individual civil servants will trim their advice to prevailing winds and generally be less interested in the advice they give to ministers.

The first two pillars are perhaps a bit shaky these days, but they do still stand up. Speaking as a life-long official, I believe that ministers have more to fear than civil servants from full disclosure to Parliament.

As to civil servants, they clearly are a breeding breed (though I think less than their predecessors were). The respectable reason for this is, again, the doctrine of ministerial responsibility. Ministers take the blame, so they should take the kicks too. But would civil servants in practice be less than frank if their files were really going to be open? My guess is that some would and some would not. Perhaps the verb would conjugate: "I give disinterested advice, you trim, he plays to the gallery."

Only the cheaper newspapers think that issues of public policy are simple, clear-cut, black and white. Of course, there must be pro and con in any such issue; if the point were not arguable, there would be no need to agonize over the decision. So incorrupt and competent officials have little to fear from having their lucubrations made public, because the person who takes the decision is the minister, not the official, and he is accountable to the public. That is the way our democracy works.

The few who have read this article thus far will see what I think the select committees are really after. It is not that they have a prurient desire to see dirty underclothes washed in public. What they want is knowledge. The reason we have so many senior civil servants is not that they are idle; they are not. Partly of course it is interdepartmental consultations, (as exemplified in the issue of fees for overseas students or what not) which

is industriously collected, possible courses exhaustively analysed, and submissions laboriously arranged and rearranged to give elegant and simple presentations of complex issues to busy and impatient ministers. Certainly outside I have not seen anything like the thoroughness of study of policy issues to which I was trained in Whitehall, though I do not doubt a good thing, though it is expensive and time-consuming.

That is not however the point in the present context. Backbench Members of Parliament want their thinking done for them. On the floor of the House they get in full the pros from ministers, and from the more honest, the cons dismissed in a paragraph. What they want is the policy analysis from the professionals so that they can score facile debating points off it and catch a headline without having to do the work. Both government and Opposition backbenchers want this, to be fair, though on the government side there are of course informal (and unpublished) liaison arrangements for backbenchers to meet ministers as policy develop and approach disengagement. Of course, in the last resort, the government party has a whipable majority on a select committee.

Perhaps I sound cynical. I do not mean to be. What the select committee is seeking is probably as near as we can get in modern circumstances to better control of the executive. Which again is how our democracy works. And if it works, it is because it recognizes that politics is a dirty business, and government often even more so, but at least ministers are there to take the rap and be accountable to Parliament and the country in exchange for their status, pay and perks.

"Well, Sloman," I hear you say, "that's a fine sermon. What are you going to do about select committees?" My answer is that better men than I have laboured at this (including Mr Price) without much earthshaking result. My own house of a contribution to the debate is that we should consider taking a leaf from the American book. MPs, whatever their undoubted merits, are not experts in the extraction of oral evidence from sometimes reluctant witnesses. I believe that congressional committees have counsel at their disposal and in charge of the questioning. More knowledgeable, better planned and more penetrating questioning would frustrate officials' attempts to fluff their answers, and, more important, would lead to better informed and more constructive recommendations. There would of course be a cost.

At all events, either this way or some other way I personally hope that the new select committees can be made to work. It is surely worth making trouble over them.

Peter Sloman recently retired as education officer of the Association of Metropolitan Authorities. He was formerly in the Department of Education and Science.

NEWS

Winners boycott award ceremony

by Roger Milne

Angry winners of the schools section of a national competition boycotted the award-giving ceremony in London last week after complaints that the prizemoney had been reallocated unfairly.

Primrose Hill Junior School, London, the South Essex Sixth Form and Kings Norton Girls' School, Birmingham, were placed first, second and third respectively in a competition for ideas on how towns and villages might be designed in the year 2000.

But after a row with the organizers of the Tomorrow's New Community Competition, none of the schools was present when the winning cheques were presented by television personality Judith Hann, from the BBC1 *Tomorrow's World* programme.

The competition was sponsored by *The Guardian* newspaper, Wates the builders, JCI, Planning Newspaper and the Town and Country Planning Association.

The schools were expecting to receive £300, £150 and £50 respectively for their winning entries. The event they received £100, £50 and £25. And the competition organizers, Judith Hann and the editor of *The Guardian*, have been told by letter by the schools that the contestants are very unhappy with the outcome.

The schools claim they have been treated "shabbily". The competition was open to professional planners and architects, laymen and schools—both in terms of group entries and by individual schoolchildren. The schools' money was reduced and the prize money awarded in other ways. The organizers refused to meet on the situation. A spokesman said it was a matter between the schools and the organizers.

The prize winning Primrose Hill Junior School, London, said it was "very disappointed" that the whole affair was a bitter taste in her mouth. She said she had no idea that the money had been reduced.

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about so few entries but some felt that the prize money had been reallocated unfairly. The three schools involved in the protest were the only ones to work their ideas up into a bid for the second stage of the competition. They knew they would be awarded in the first round, but they wanted to see their ideas put into practice.

Now the schools claim they have been treated "shabbily". The competition was open to professional planners and architects, laymen and schools—both in terms of group entries and by individual schoolchildren. The schools' money was reduced and the prize money awarded in other ways. The organizers refused to meet on the situation. A spokesman said it was a matter between the schools and the organizers.

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NEWS

Kinnock and Carlisle clash over 'pay-as-you-learn' plan

by David Passmore

Education Spokesman Neil Kinnock last Saturday said the Government's policy of allowing voluntary contributions to help pay for school fees was "a very good idea". But on the same day, Education Secretary Mr Mark Carlisle said that there was "nothing wrong at all" in parents contributing voluntarily to their children's education.

Referring to reports in *The TES* that parents' contributions were now providing more than half the capital allowances in some schools, Mr Kinnock said that social conformity and desperation were making such contributions "effectively compulsory" in many schools.

"We are seeing a system which turns headmasters into touts and teachers into handymen, where children draw lots to use books and equipment, and parents become flag sellers," he said.

Mr Kinnock later withdrew his claim about lotteries after being challenged in the Commons to name the schools where it was alleged to take place.

Addressing a Conservative conference in Winchester the same day, Education Secretary Mr Mark Carlisle poured scorn on "all this nonsense" about parents having to pay for State education, or of breaking the provisions of the 1944 Education Act, even of acting illegally. There was no suggestion of going back on the clear statutory duty on

Leas to provide free of charge sufficient education for the children in their area, he said—no question of demanding direct payment towards schools or essential school materials.

But Mr Carlisle stood firm on allowing parents to make contributions to schools if they wished and leaving head teachers free to decide how to spend the extra money. "If the extra income can be used to buy new curtains for the school hall... or cricket bats for the first XI... why should it not be spent on books for the school library, on extra books for the classroom or more materials for the art room?" he asked.

The public purse was not limitless, he told his audience. It was hypocritical to cry out for more money and then to refuse it when it was offered voluntarily.

The Charity Commission has told the parent-teacher association at Ramsgate Junior School, Orvington, Kent, to limit its use of funds to activities "not normally provided by the local education authority" before it can receive charitable status.

He suggested that the group should seek legal advice in case evidence might show that the county council was failing to fulfil its obligations, by trying to get other bodies to support teachers.

The group adopted the aim to maintain and improve the standards and provisions of the education system, to provide a forum for debate, to collect and pass on information about cuts in public education spending, to express concern over the effects of such cuts, and to guard against any future cuts by joint action between PTAs.

Mr Lee said he was delighted with the choice of successor. "He will bring publicity to our cause, he is an able and dedicated man and as a parent of a mentally handicapped child he is aware of the problems families have to face."

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'Sponsored' teacher plan opposed

Parents and teachers in Warwickshire—the centre of the row over suggested sponsorship of teachers by parent organizations—have overwhelmingly rejected the policy.

At the first annual meeting of the Warwickshire combined PTA/PA group in Leamington Spa, chairman Mr Bernard Davies—a parent and a university lecturer—told the meeting of 60: "The proposal in Warwickshire to help teachers' salaries paid out of voluntary funds has created a lot of interest."

In view of this, the need for some sort of organization which would seek to defend schools from such policies seems greater than ever. Opinion around school parent groups seems to be against this and we would hope to prevent it from getting a foothold.

"I think we have already had an influence on some of the county council's proposals for making policy. It was rejected by the finance sub-committee, but will come up before the next policy and resources committee. It is an issue of major importance and we will attempt to get our representatives to attend."

He suggested that the group should seek legal advice in case evidence might show that the county council was failing to fulfil its obligations, by trying to get other bodies to support teachers.

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Brian Rix

Farce star to work for handicapped

Brian Rix, the actor, best known for his trouser dropping *Whitehall* farces, is to be the new secretary general of Mencap, the National Society for Mentally Handicapped Children and Adults.

Mr Rix will begin his new job in October when Mr George Lee resigns after 24 years as secretary general.

Mr Lee said he was delighted with the choice of successor. "He will bring publicity to our cause, he is an able and dedicated man and as a parent of a mentally handicapped child he is aware of the problems families have to face."

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NEWS

Poor standard of teachers attacked

by David Lister

More action is needed to improve the quality of teachers, Sir Charles Carter, chairman of the Policy Studies Institute research and management committee and former vice-chancellor of Lancaster University, said yesterday.

Sir Charles told the conference of the Association of Colleges for Further and Higher Education in Bournemouth: "The defensive reactions which characterize the response of teachers' organizations to any outside suggestions for improvement seem to me to be the natural consequence of uncertainty about quality. If we had better

teachers, they could afford to be more humble."

Sir Charles said that much of the present attack on teachers consisted of people who would not be accepted for training, and who would have had much less chance of acceptance in the 1930s.

He added: "The public is very well aware that the number of hours per year of contractually required work for teachers in schools, or for that matter in FE, is low. And I do not see any general conviction that the honour and self-discipline appropriately expected of a profession produces voluntary additional hours on a sufficient scale. Furthermore, it cannot be re-

garded as very satisfactory that we put back into the schools young men and women three or four years after they have left school, with virtually no experience outside academic institutions."

Even when they are in the academic institutions, following a teacher-training course, Sir Charles said, was a danger of isolation, especially of the staff, "and a consequent relapse into a cosy contentment with an out of date and insufficiently challenging curriculum."

Sir Charles called for a policy of preference to mature students, with a very careful system of assessment of their overall educational and work experience.

"One should be able to find among mature students", he said, "people whose general education, including the educational experience of bringing up their own families, is superior to that of many of those whose 'first cycle' has immediately followed school, and whose motivation can be more clearly perceived."

He also recommended that general and subject based education be assimilated even more closely to other degree level studies.

"I want", he said, "to see the village or city schoolmaster and mistress once more seen as learned, the intellectual equal of the doctor and the solicitor."

Survival courses plan for violent children

by Richard Garner

A plan to send children away on self-survival courses to stop them becoming violent and disruptive in the classroom when they reach secondary school was outlined this week by Mr Terry Casey, the general secretary of the National Association of Schoolmasters' Union of Women Teachers.

Mr Casey was addressing a two-day seminar staged by the union aimed at establishing a residential training centre where children could come to grips with living by tough, outward bound-type training.

Mr Casey, writing in his union's magazine, said that "soft soap and sympathy" methods had failed to get to grips with the problem after a "long run" while harsher forms of penal institutions—such as Borstal—had produced a high proportion of recidivists.

He added: "The outward bound concept of teaching self-survival in a non-selfish way has been adapted in the outdoor pursuits centres dotted round our wider country."



A replica of The Christian Herald of June 23, 1880, marks the bicentenary of the modern Sunday School movement and commemorates Robert Raikes, "the father of the Sunday Schools". Copies are available from The Christian Herald, 129 High Street, Rainham, Kent, enclosing postage.

Arbitration on 20% claim to be heard next month

The teachers' claim for a 20 per cent pay increase in 1980/81 is expected to be heard by arbitrators during the first week of July.

Teachers' panel, led by Sir John Wood, chairman of the Capital Arbitration Committee and the man who presided over the 1979 arbitration over the teachers' claim for a London allowance, would be the independent body of the arbitration panel of three.

Nursery boost from falling rolls

Cheap new nursery units could be provided in scores of primary schools where the number of pupils has dwindled, according to a new broadsheet circulated to all local education authorities by the Department of Education and Science.

The broadsheet, the first in a series, which deals with low cost conversion of surplus primary school space, says: "With this continuing decline of primary school numbers, LEAs now have a much wider choice of surplus primary accommodation available for conversion. Much of this is comparatively new and fully meets modern constructional standards and the requirements of School Premises Regulations."

Sixth form guide to the EEC

A brief guide for sixth formers to the European Community is available in response to many requests from teachers for material on the EEC suitable for use in schools.

The brightly coloured leaflet, from the Community's London Office, gives details of which countries belong to the Community, what it does, how decisions are taken and how Britain's relationship with the EEC has developed.

Written by Dr Ralph Rickards, a director of Cambridge Communications, a private communications firm, it is available on request from the London Information Office, the Commission of the European Communities, 20 Kensington Gardens, London W8 4QG.

Protesters' grant 'under review'

The Home Office has put "under review" a £42,000 grant to a student group whose newspaper, "Rock Against Thatcher", was banned.

Mr Timothy Renshaw, Home Office Junior Minister, described the grant as "a purely political and was commissioning the Students' Community Against Thatcher, which was a

the matter was raised in the House of Commons last week.

He said that the grant from the Voluntary Services Unit of the Home Office to the organization is now under active review.

The student group claims that it was a party political and was commissioning only against cuts in education.

Baby died because mother could not read

by Bert Lodge

A baby starved to death because his mother could not read instructions on the tins from which she was feeding him. She did not realize she was increasing the feeds as the tins went by.

Clegg error disagreement still hangs over pay claim

The wide gap which still separates the Scottish local authorities and the teaching unions over their 18.6 per cent pay claim emerged clearly at last weekend's 134th annual meeting of the Educational Institute of Scotland, which has 80 per cent membership among Scottish teachers.

The major stumbling block is the fundamentally different attitudes of both sides to the Clegg Commission's "error". The management regard the 14 per cent offer made to the teachers last week as an effective

increase of 18 per cent, adjusted to take account of the commission's 4 per cent "over-payment" for 1979-80.

'Petty tyranny' on staffing

A surprise controversy was provided by an apparently innocuous paper from the institute's education committee on staff development procedures within schools. It was eventually approved by the narrow margin of 189 votes to 156 but not before strenuous efforts had been made to have it remitted for further consideration.

Ban the belt call raised

The call for the immediate abolition of corporal punishment reappeared at the conference, in the name of Lothian Secondary Education Section, and was again amended in favour of a more gradual approach.



Mrs Rose Galt delivers her presidential address to the EIS annual meeting at Stirling.

'Serious' industrial action if pay dispute not settled

An emergency resolution from the national executive of the Educational Institute of Scotland calling for industrial action over the local authorities' pay offer was passed at the annual conference last week.

Single scale defeat

Two hard-fought pay battles were once again defeated. Glasgow local association, the most militant of the EIS branches, suffered another defeat in its long-running efforts to convince the institute to a single pay scale for primary and secondary teachers.

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Resolution passed to protect homosexuals

The second, Miss Jane Collett, said homosexuals ought to be able to depend on the support of their union.

Conference passed the motion by a large majority with three delegates voting for their dissent to be noted. The chairman of the General Teaching Council for Scotland, Mr George MacPadden, abstained. A similar motion last year was defeated.

Also, a recent case in Scotland where a teacher was dismissed because of his homosexuality was later upheld by an industrial tribunal, although a further appeal is under way.

Mr Feuton stressed that the aim was not to give approval to teachers who "aggressively" advertised their homosexuality but to protect the teachers from others prying into their sexuality.

Hestair Hope
St. Phillips Drive, Bolton, Oldham,
OL2 6AG. Telephone: 061-652 1411.

We're all working for you.

Last year's widely-acclaimed research on pupil performance and school organization is now under attack. Bob Doe reports

Second thoughts on the Rutter ethos

When *Fifteen Thousand Hours*, the book of the research of Professor Michael Rutter and his team, was published last year, it was widely acclaimed as justifying many practices of local authorities and schools. It seemed to give the lie to the suggestion that schools could do nothing about low intelligence or poor social backgrounds.

But since its publication the research has run into a barrage of complaints and criticisms that have led some to question whether any reliance can be placed on the Rutter findings.

Slowly emerging from the research journals is a catalogue of technical and philosophical objections. Some are serious and some nit-picking, and some are as vituperous as to verge on the libellous. But it seems at times by the publicity given to *Fifteen Thousand Hours* and the questionable conclusions drawn from it by others more than by the shortcomings in the work itself, some have called into question the motives of the researchers in attacks that have even brought serious critics of the research to its defence.

Using verbal reasoning tests as an indication of the intellectual abilities and future's occupations as a measure of social differences, the Rutter research team found behaviour and academic achievement varied markedly between 32 inner London comprehensives even when the IQ and background differences of their intakes were allowed for.

"Pupils in the lowest ability group (band three) in the best school did as well as pupils in the top-ability band one in the worst. After allowing for Rutter's versions of social and intelligence differences, the exam score of the best school was 70 per cent above the average, while that of the worst was 50 per cent below."

The researchers also claim to have shown that schools varied considerably in the rates of attendance, discipline, and in standards of behaviour in school even after differences in intake were taken into account.

Coinciding with higher standards of attainment and behaviour were "certain characteristics of schools as social institutions". They are these, amounted to a successful school "ethos" typified by punctual and well-organized teachers; agreed standards of discipline, though not harsh ones; regular homework and checks that teachers set it; policies decided by the heads and senior staff; clean and tidy classrooms with little graffiti or damage; and a system of rewards and recognition for good pupils.

"We may conclude that the results carry a strong implication that schools can do much to foster good behaviour and attainment and even in a disadvantaged area, schools can be a force for the good," the final sentence in their book says.

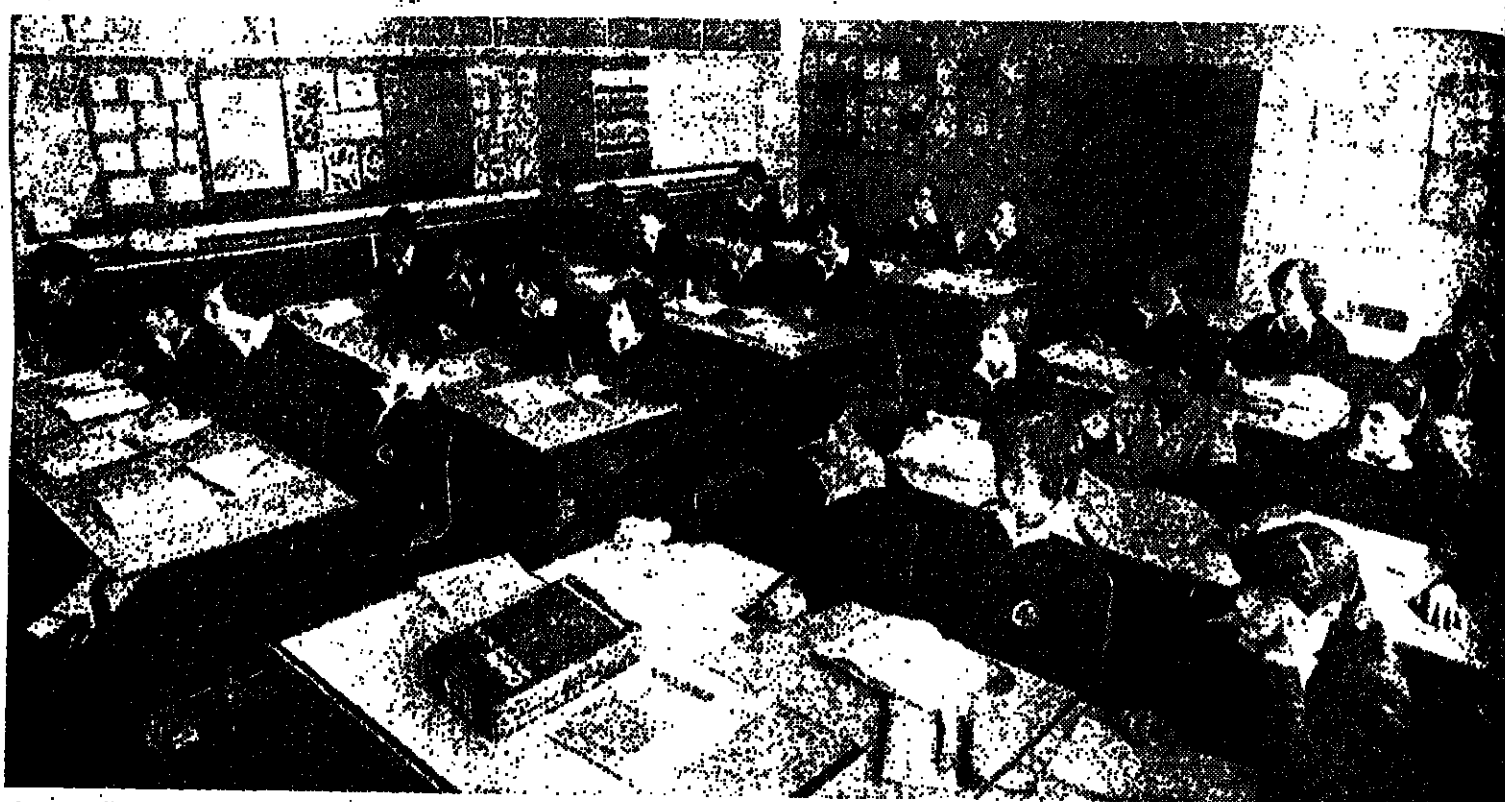
But all this assumes the team were able to balance statistically the differences in intakes between the schools; an assumption strongly doubted by many of their critics.

Professor Harvey Goldstein, Professor of educational statistics at the London University Institute of Education, says many other things besides IQ scores and fathers' jobs affect pupil performances.

Writing in the *Journal of Child Psychology and Psychiatry* he says this, and other technical deficiencies in the adjustment of intakes, "indicates that much is left to be desired and they do not encourage the reader to place a great deal of confidence in the authors' results."

Two Oxford academics, Mr Anthony Heath, sociologist, and Mr Peter Clifford, mathematician, in the *Oxford Review of Education* claim that the evidence of *Fifteen Thousand Hours*, the school, upended makes very little difference.

They point out that only 65 per cent of the variation found in school differences was explained by school differences, whereas 27 per cent was explained by differences in pupils' social training scores and two thirds of the variation remained unexplained.



A clean and well-ordered classroom: a vital key to success according to Professor Rutter's research.

Attendance	Academic	Behaviour
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12

school careers." Factors that might well have wiped out the 65 per cent influence attributed to the secondary schools.

"It is surely quite reasonable to speculate that voluntary-aided schools attract more interested and educationally ambitious parents and that they also tend to run a 'tight ship' with more emphasis on uniform, homework, lessons, starting on time and the like."

"If this were so it would be quite wrong to attribute their success to the 'tight ship' style of management," the quality and maintenance of the intake might simply provide them with the conditions under which a tight ship can be run without mutiny."

Heath and Clifford also criticize the crude "messiness" used by the Rutter team. Fathers' occupations were split into three categories: (1) professional, management and clerical, (2) skilled manual, and (3) semi-skilled, unskilled and unemployed. They say Rutter should also have considered the effects of different primary schooling.

Other critics attack the researchers for assuming that the "ethos" discovered in the "good" schools was the source of their success. Through *Fifteen Thousand Hours* contains warnings that such deficiencies are the result of cause and effect, these did not satisfy the critics.

With such sensitive political and social issues it was important to put the evidence sufficiently prominently so that even the reader who wants to believe the researchers' version of the story would be forced to take account of the evidence.

Rutter failed to take any account of parental interest and encouragement. If he had not controlled for these, all the school factors which are well known to affect children's

Rutter says:

- Academic and behaviour standards vary dramatically between schools with similar intakes
- Successful schools are punctual, clean and well ordered and set homework and discipline standards
- This "tight ship" ethos partly caused their success
- Less able pupils do better in schools with more able pupils than in those where there are few clever children
- These results apply to other schools

Critics say Rutter:

- Failed to take into account major differences in intakes
- Wrongly analysed some statistics so school factors seemed more important than they were
- Wrongly assumed differences in school styles and achievements were "cause and effect"
- Over estimated the extent to which schools can overcome social influences
- In effect, blamed teachers for social inequalities
- Used 12 untypical inner London comprehensives

the results have been used to refute the "pessimistic" views of the American, Christopher Jencks, that educational policy in modern capitalist societies can do little to lessen social inequality. Mr Jencks described as "statistical hubris" the Rutter team's claim that these results applied to all schools.

"The success of these schools is extremely relative," writes Mr Jencks. "In the early 1970s when the world was being done 'knowing' middle class parents were sending their children anywhere but to these (comprehensive) schools."

"For most of these schools the mere fact of attending there means their pupils have already failed to make the grade for social mobility. We are not really dealing with variations in the success of these schools but with small gradations in the degree of their failure."

He also questions the researchers' judgement of the facts. Rutter claimed that in the accompanying table of rank orders that good or bad attendance, academic performance and behaviour went together consistently.

"It could be described like that," says Acton, but to him, "from one consistently bad and one consistently good, the rankings look thoroughly jumbled up."

Professor Ted Wragg of Exeter University also questioned whether the Rutter schools were typical. In an occasional publication from that university, called *Perspectives*, which was devoted to several critical views of the Rutter research, he wrote, "Rutter's research relates to 12 schools in the London Education Authority with 28 per cent of the children handicapped by some psychiatric disorder, 28 per cent of fathers carrying convictions for criminal offences, 51 per cent of children in overcrowded homes, a

pupil-teacher ratio of 14.5 to one, 43 per cent of teachers in post for three years or less, very few children of high intelligence and a mean score of 92 for non-verbal intelligence (average 100) even after immigrant children have been excluded."

He also thought some of the "cause and effect" claims "go over the top."

Professor Rutter and his team are unrepentant about their major conclusion. In the latest *Educational Research*, in reply to Mr Acton's critique they say that they considered judgment is that this evidence, and that from other studies, give good reason to suppose they had uncovered cause and effect.

Only studies of planned changes in schools could make certain of this, but they stood by their view and the final statement about schools being "a force for good" as a "fair appraisal of the state of the art."

Their complaint of misinterpretation and misstatements of their work, false imputations, and unwarranted implications.

Their work was not an essay on the relationship between education policy and social inequality but a research report.

"We did not set out to find solutions to present problems of schooling and society but merely to follow the progress of 12,000 London children through their secondary schooling and to describe some aspects of their life at school."

On the question of whether schools can alleviate inequality the authors of *Fifteen Thousand Hours* say: "Raising the quality of education will not at all do away with the effects of making all pupils the same."

Unlike Jencks, but study was concerned with the question of whether raising the quality of education could have an impact on rules

ing overall standards of studies (ie an effect on levels and outcomes). The findings suggest that it could."

In a reply to the *Exeter Review* critics, one of the Rutter group, Mr Peter Mortimore, says worthwhile research in this area is difficult.

Mr Mortimore, now Director of Research and Statistics for DfEE, says the adjustment of intake differences was done as best data available. He acknowledged that some of the objections to the statistical for the "ethos" were "fair."

So where does all this leave *Fifteen Thousand Hours*? It is a book, tendentious, incoherent, should never have been published. It is the verdict of Mr Acton, a leading expert on the higher education system.

Heath and Clifford say it is a book on which teachers and school leaders to change their practices.

"No doubt it is desirable to try to finish lessons on time, to have pictures on the wall, to have one's teaching so that more time is spent on the topic rather than on giving out equipment, but these are not entitled to use Rutter's book as proof that this will improve outcomes."

Not all teachers had the plant pupils that made a tight ship feasible. They got poorer results, they got more complaints, they got more letters of complaint, they got more letters of complaint, they got more letters of complaint.

Professor Goldstein says results should be treated with caution if not scepticism.

"Nevertheless, the book behind the study is a masterpiece of genuine school improvement."

Professor Wragg warns, "Like published investigations, which receive publicity it is open to people who have not read the book to make a selection of the work and to use it in a way that is not intended."

The work raised important fundamental questions about the schools and the more effective use of people and resources. "It was a quite wrong for anyone, no matter what reservations he might have about methodology or design, to dismiss the work in its entirety."

Fifteen Thousand Hours by Michael Rutter, Barbara Maughan, Peter Mortimore and Janet Ouston. Open Books, 1979, £3.50.

World Bank education department reviews 17 years progress

International drive to teach basics

Hilary Wilce

World's largest international agency working in the field of education has had a mixed record to date, and must learn from its past projects if it is to develop a suitable future.

Akili Habte, director of the World Bank's education department, told a London audience last week the first studies of the impact of the bank's educational work began on a small scale 17 years ago, are now under discussion.

"We must do more of these studies," he said, "I feel very strongly that we must take advantage of our experience in the past, and we must be able to learn from our mistakes. It would be disastrous if we were not to do this."

Habte pointed out that this was not possible until recently, as he had been learning as they went along. Now 50 projects had been completed and problem areas were becoming clearer.

One of these was secondary education. "We have implemented a large number of secondary schools, and we have found out we are facing problems with these," he said. "The problems included the underuse of facilities, a lack of teachers, and an inability to meet current and maintenance costs."

Speaking just two weeks before the release of the World Bank's education policy paper, Dr Habte said future work would concentrate on the provision of basic education. "We do not use the word primary because people may associate that only with primary schools," he said.

Great attention would be paid to providing equal opportunities and to the planning and management of education systems.

About £450m will be spent on education and training between 1979 and 1983, 8 per cent of total projected lending.

The World Bank's involvement with education has grown steadily over the past decade. Between 1970 and 1974 it lent \$85m, 5.5 per cent of total lending, for education and training. Between 1975 and 1978 this grew to £206m, 6 per cent of total lending.

The bank, which lends money to developing countries around the world, supplies funds for education and training associated with the development of industry and services. Money also goes to education through integrated rural development.

Dr Habte was speaking at the University of London Institute of Education on the eve of a two-day seminar on the World Bank's education policy paper.

He said that to date the bank had been involved in educational development in more than 80 countries, had built 10,000 institutions and had supplied nine countries with two hundred million textbooks.

A growing number of Third World countries are accusing the International Monetary Fund of aggravating their economic problems and forcing them to cut back on educational and other social development programmes.

Jamaica, the most recent country to speak out against the IMF, says that as a result of steps taken in response to the Fund's requirements, education projects such as play groups, literacy programmes and school developments in poorer areas

have been cut back drastically. The escalating resentment of the developing world centres on the tough economic prescriptions which the IMF attaches to its loans and which critics say, hamper rather than help the health of Third World economies.

Jamaica has had an IMF drawing arrangement cancelled because of its failure to divert sufficient funds into productive investments.

But a spokesman for Jamaica in London said that the IMF loan conditions had led to shortages, price increases and a decline in production and in purchasing power.

Turkey, Portugal, Peru, Egypt and

Tanzania have all spoken out against the bitter economic pill that the Fund makes borrowing countries swallow.

IMF loans are given to assist countries with balance of payments problems. Unlike the World Bank, the Fund does not loan money for development projects, although a country acquiring IMF money could then choose to divert more of its own funds into social development.

The IMF is not interested in the finer details of what a country does with money borrowed from it. Mr James Ogola, legal adviser with the Fund's Paris office, told the TES last week.

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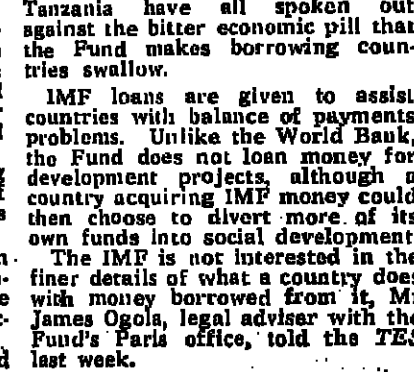
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Package to improve child care

Sandwell social services committee has voted for a £30,000 package of improvements to its child care system.

The major items include more night staff and more training for residential workers. The committee wants to recruit peripatetic matrons to cover for staff on training courses.

This follows a report from the social services department whose recommendations would have cost about £160,000 to implement in full. The committee has put aside some items for possible action next year.

The leaking of the confidential report has caused anger and embarrassment among Sandwell local authority officials. Articles referring to a near break-down in Sandwell's child care system are described as "irresponsible" and "ridiculous".

References in the report to "a charged and explosive atmosphere" at one of the homes and to truancy and theft at others had been taken out of context, said Mr Kenneth Smith, social services director.

He believed the committee's recommendations, if approved by the council, would go a long way to easing any problems.

The Black Country branch of the British Association of Social Workers said that Sandwell had suffered for its honesty. The poor pay and conditions and lack of training opportunities suffered by all residential social workers, combined with changes in the law which meant that children's homes were dealing with older, often highly disturbed young people, had created problems in homes throughout the country. Sandwell's difficulties were no more than typical.

Manpower needs are only a rough guide to colleges

by Biddy Passmore

Manpower experts said last week that predicting the needs of industry could provide only very rough guidance for the higher education system.

Giving evidence to the Select Committee on Education, the Association of Graduate Careers Advisory Services, told the committee that a study of demand for graduates would be published by the Unit for Manpower Studies next month. Information on the output of higher education especially in the public sector was badly needed, he said. An independent body within the civil service was necessary.

The Government was examining ways of coordinating the planning of both sectors of higher education, Mr Alan Thompson, deputy secretary at the DES told Mr Rhodes, a member of the Department of Industry.

Professor Gareth Williams, head of the educational research department at Lancaster University, said it was most important to focus on the needs of industry. "A review of courses, then on the basis of people's needs, rather than on the basis of what we can do," he said.

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Foster parent training packs are launched

by Sharon Golden

It is easier to learn how to maintain a car than to be a parent, according to Miss Christine Reeves, director of the National Foster Care Association. To put that right, the association has launched three new training packages aimed at foster parents.

The scheme includes two courses developed from a similar project funded in the United States by the Government and tested in 12 areas in the United Kingdom this spring. Here, Dr Barnardo's is providing the material for three years for the £80,000 over three years for the scheme, known as "Fostering Plus".

Originally aimed at new foster parents, "Fostering Plus" has found foster parents with groups which include foster parents, residential and field social workers, training and fostering officers, and fostering volunteers.

Mrs Norma Gregory, a foster parent appointed by the London Borough of Redbridge as a course leader, said the scheme needed to be developed professionally because the demand is greater than we can meet.

More than 250 people have been on the courses so far.

Low standards of training and little opportunity to learn and play the game within the education system are cited. Coupled with this is the concern that tennis is given a low priority in teacher training syllabuses.

Although this report is outrageous about the state of British tennis, it contains positive suggestions for improvement, including a complete overhaul of the LTA.

Other members of the committee of inquiry were drawn from the Sports Council, the LTA itself and people active in the game.

The report is available from the Sports Council, over £2.00.

Hestair Hope

1C/CS
28th January 1980

Michelangelo Buonarroti,
C/O Pope Julius II,
The Vatican,
Rome,
Italy.

Dear Michelangelo,
I am happy to hear that you received your order safely, that you have already used the paint and found it ideal for the job in hand.
I am in receipt of your repeat order and I am taking this opportunity to ask if you could just check the quantities before we despatch.
I think you might have erred on the generous side as there is enough paint on the order to cover an entire building, including the ceiling!
I look forward to your reply.

Yours sincerely,
for HESTAIR HOPE LTD - EDUCATION

Louis C. Johnston
Product Manager

The Hestair Hope Catalogue.
Only the best will ever be in it.

SPECIAL FEATURES

TES writers DIANE SPENCER and IAN KELLAS join school trips to Bridgetown, Barbados and Butlin's holiday camp in North Wales

Some like it hot in Little England

It was mercilessly hot. Sugar cane was stacked high in the yard. Drops of hot water splattered the crowd of children from a steam-powered hoist high above their heads, and blasts of even hotter air gushed from inside the dark building. The smell was nauseatingly sweet and sulphurous. Not surprisingly, three children had to be cooled into leaving the relative comfort of the bus to take part in their educational visit of the day—a Barbadian sugar mill. Fifteen of the bus load of 40 children were from E. P. Collier primary school, a multi-racial school near the centre of Bridgetown, and the rest from Wilkie Cumberbatch School on the outskirts of the Barbadian capital, Bridgetown.

The Reading children, mainly aged between 10 and 12, were on a pioneering three-week visit to forge what their head teacher Mr John Shearman hopes will be a continuing exchange with the Barbadian school.

The link with Wilkie Cumberbatch began when Mr Shearman visited Barbados a few years ago on an educational bursary given by the Community Relations Commission.

Since then, the children have established pen friends and exchanged work. Mrs Milred Payne, the head of Wilkie Cumberbatch, visited E. P. Collier last year. She hopes to take a small group of her pupils back in two years' time.

Apart from the sugar mill—an experience 1, for one, never wish to repeat—the children spent their time on other educational visits with Barbadian classmates, sharing their lessons, visiting their homes and fitting in some sight-seeing and swimming.

Mr Shearman, who is also chairman of Reading Community Relations Council, hopes that the visit will promote positive attitudes for the future wellbeing of Britain's multi-racial society.

He believes that children should begin to understand, at an early age, the importance of learning about other cultures.

Three of the group's parents were born in Barbados—Reading has the highest number of expatriate Barbadians in Britain—two are from India and the rest are English.

It is the kind of school trip that would make many teachers reach for the bottle, or at least the tranquillizers: coping with 15 young children for three weeks, 8,000 miles away from home requires good organization and above all, stamina. But Mr Shearman and his



Lomuel Jordan from Wilkie Cumberbatch conducts an impromptu quiz for class 4B in the shade of an almond tree.



John Shearman, head of E. P. Collier records a hand clapping song at Wilkie Cumberbatch for the pupils back home to learn.

colleague Mrs Sheila Watson, a Guyanese and her husband who is from Nepal and looked on as an auxiliary teacher by the children, survived their 15-hour day with remarkable fortitude.

So did the children. After two days one girl wanted to go back on the next plane as did a boy, suffering badly from mosquito bites. By the third day both had settled down quite happily.

At first they found it hard to adjust to the heat of this, the most

eastern of Caribbean islands. On the night of arrival—a steaming 80 odd degrees Fahrenheit—the boys had dutifully showered and automatically re-donned their vests and then put their pyjamas on.

On their first day in Wilkie Cumberbatch school, their third on the island, the group settled down to work at the kind of arithmetic I remember doing for my 11 Plus.

"If three men took six days to dig a ditch how long would it take five men?" This was hardly surprising

as Barbados still operate a common entrance examination similar to the 11-plus of 20 years ago.

This sort of who will go to the older secondary schools, as the former grammar schools are called, or the "secondaries" similar to our secondary moderns built since free secondary education was introduced in 1961. The Barbadian Government and the education department is wrestling with the problem of how to go fully comprehensive without throwing away the good with the bad.

Although it was not the kind of maths they were used to, the Reading children coped. They also found the formal session of reading aloud one after the other strange.

Their only ordeal was being stared at, as one boy wrote later, "as if we were some rare specimens or space mariners". But it was friendly, not hostile curiosity, directed equally at Danno, who is black, as much as at the other children.

Each class had a message of welcome for them, with the class motto "Hard work overcomes all obstacles" pinned on the wall. The community as a whole was equally welcoming.

It was the youth hostel, run by a secondary school teacher and her husband, which made the trip possible. Originally, Mr Shearman wanted the children to stay in Barbadian homes. Mrs Payne found that parents were reluctant to do this as they felt unable to provide adequate hospitality. However, the Reading children come from similar economic and social backgrounds as the Wilkie Cumberbatch pupils: shop and factory workers, bus drivers, motor mechanics.

Parents have had to find £200 out of the £300. Some took part-time jobs to raise the money, the rest came from a sponsored "spell-in", donations and sponsorship from local industries and organizations.

Berkshire county council gave the exchange its blessing in the form of two supply teachers.

By the second week, the group had adjusted to the tropical life: nightly battle with mosquitoes, daily one with the sun. "Three showers a day, miss, it's a bit much, I usually only have one bath a week."

The children were disciplined into keeping a diary and sketching at least one tree, flower or shrub which flourished in the hostel gar-



These provide the bus an exhibition about their which will be held in Reading centre soon.

The most striking contrast between the Barbadian and Reading schools is their size: Wilkie Cumberbatch is bursting at the seams with 700 children; E. P. Collier is shrinking with 200.

Many classrooms in Wilkie Cumberbatch have to be shared between two classes.

The immediate visual difference is the uniforms: every child in Barbados from nursery school leaver wears one, all pleased to do so. The Wilkie Cumberbatch girls wear Royal dresses with sailor collars and white braid, the boys beige shorts and shirts.

Teaching styles are more than in most English primaries: teachers are called "Ma'am or Sir". The children learn more by doing, by experiment and discussion. They spend more time on log, grammar, writing, arithmetic.

Barbados has the highest literacy rate of the Caribbean—the government claims it is 97 per cent. Classrooms too are formally out and there is little work played on the walls. Amapa in this heat, the school day falls almost the same pattern as in England, 9 am to 3 pm.

Free milk and free school for the primaries caused some slight from the English teachers. Even the syllabus is still skewed towards Europe. Children can more easily recite the names of all the European countries, they can the Caribbean islands: wonder, the child, Barbados, known as Little England.

service staffing over the years has been largely cut by local authority cuts so the Department of Employment does not yet know what it does next year, it has so far made very few plans to make any more.

The plan to cut its staff by about 30 per cent, which seriously alarmed the responsible for the service, when it was disclosed in 1978 earlier this year—is in its seventh year, says the

Service's Commission, the ability of the service with the expansion of the

Programme will be severely affected. Although the present staff

may be able to cope with the work, it is not clear how much more they can do.

When the service was first set up, it was a very small unit, but it has grown to be a major part of the service.

When he once sent the head gardener at Pwllheli off to college to study poetry, Billy is reported to have said: "But the garden is now feared to be in the death bed, and always ready to consider opening up his country school during the off-season."

In the evenings after the coaches roll back to camp, the children are thrilled in the bars and coffee shops, with up their projects or diaries. Under the heading: "The funniest thing I

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School to work

Move to relieve jobless crisis among over 17s

by Mark Jackson

Proposals for a "senior YOP"—a programme for unemployed youngsters over 17—are likely to be put before the Government soon. They will be aimed at relieving the growing long term unemployment among the under 25s.

Until now the Government has given absolute priority to school leavers, even though it has meant cutting back the Special Temporary Employment Programme, the adult scheme which is the only help available to the over 19s. But the Manpower Services Commission and Employment Ministers are concerned about the growth of a hard core of youngsters who may never find work.

Two developments are accentuating their fears:

● The existing STEP scheme is faltering badly, failing even to create enough places to meet its cut back target level.

● Eighteen-year-olds are shunning the Youth Opportunities Programme. The 18-year-olds presently make up only one in ten of those

in YOP, even though the guarantee of a place to those who have been out of work for more than a year gives many of them priority over new leavers. Their reluctance to accept places is thought by career officers to be partly due to the fact that the flat rate YOP allowance is not sufficiently above the dole entitlement and also because many of them see it as a "scheme for STEP, which formerly covered the

whole country and reached a peak last autumn of 18,000, is confined to areas of high unemployment, with a budget for 12,500 places. But the actual number in the programme has dropped to 10,000.

The Manpower Services Commission's area offices say that potential sponsors have become increasingly wary about the programme since last year's sudden cutback, and they also suspect that it is being affected by local authority expenditure and

staff cuts. Local councils at present sponsor two out of every three STEP projects, but the commission—which in the past has been accused by youth agencies of preferring local authority schemes—now fears that it is going to be forced to depend increasingly on the voluntary sector.

The new programme would be much more like YOP than is STEP, which is confined mainly to various kinds of work projects.

Employers provide more training

More Youth Opportunities Programme youngsters are getting their off the job training from employers and project sponsors instead of in colleges.

Almost half the youngsters on work experience with employers or in other projects are receiving systematic off the job training or further education as compared with fewer than a quarter last year.

The proportion of those on work experience with employers who are getting such training is still lower than among those in local authority and voluntary agency schemes, but has risen from 14 per cent to 38 per cent.

Colleges are providing only 41 per cent of the off the job training, as compared with 63 per cent last year—although some of the training at the project sites may be done by FE lecturers for whom a special

"outreach" pay rate has been negotiated. In the case of community service, the colleges are providing only a third of the training places.

A survey by the Manpower Services Commission's special programmes board shows that there has been an increase in the teaching of life and social skills, and in training intended to help youngsters track down permanent jobs.

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Be a student in your own classroom

Mathematics across the Curriculum

Curriculum in Action: an approach to evaluation

Technology for Teachers

Reading Development

Language Development

The Reading Curriculum and the Advisory Role

Reading and Individual Development

Careers staff unscathed by the cuts

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Schools venture into Sir Billy's best

Butlin's

It was only just after lunch but already there were shrieks and the sound of bodies thumping on the floor of the Regency Bar at Butlin's. The primary school children were getting heated and had begun to fling each other around the glittery cabaret room. A yellowing notice pinned on one of the cossieless pillars read:

"We regret that children are not allowed in this bar." Outside in the warm sunshine a couple of teachers were grabbing a few quiet moments, dangling their feet in the boiling pond and thinking about their sunbathers. It was the Fourth Activity on the timetable and they were confident that their pupils were in (or at least being thrown by) the confident hands of the black-belted judo master.

The children were in the last batch of nearly 6,000 between the ages of eight and 13 who have just passed through Butlin's holiday camp in North Wales during the three weeks before the start of the commercial season.

Butlin's have been running School Venture Weeks since 1972 but never before at Pwllheli, the largest and probably nicest of their nine big camps. This was the first time because they had only just equipped it with heating to be able to cope with the hazy, out-of-focus sun climate of North Wales.

The earth between the bright yellow gorse and bluebells on the 500-acre estate was hard and cracked and across the sparkling blue water of Cardigan Bay, Harlech Castle—like Scotland further to the north—was half lost in a haze of heat.

"Welcome to Butlinland!" beams a big painted sign just outside

Pwllheli village. Its chunky joviality is a bit ominous. But for the coloured light and the herds of flocks of the camp, and the mass-produced cheeriness, it felt that the sense of community (and fun) was genuine.

To maintain a certain air of seriousness during the schools' week, Butlin's army of one-arm bandits had been closed up, the verminous animals of the fun-fair were paraded in neat rows out of bounds, and the ubiquitous cloud-speckled Butlin's Radio were mercifully silent except for the occasional notice that a new activity was due on the timetable.

There were 30 of them on offer, ranging from first aid and crazy golf, to scuba diving and drama. All over the estate, groups of children in bright school colour bobbie caps under the watchful eye of teachers or Butlin's "support staff"—mostly trained teachers or prison officers. But of the 2,000 or so children staying at Pwllheli at any one time, about half are away during the day, climbing, sky-diving, for instance, doing traffic surveys. In Pwllheli, exploring Caernarvon Castle or touring the slate mines at Mechnwydd.

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saw at Pwllheli" the favourite item in one school seemed to be "Teacher joining in gym". "Miss shouting gets" (in a parody lesson, it turned out, not an argument). When the same event, one pupil had written: "Inevitably in a description of a slightly dim, now stayed behind, dance the whole night away."

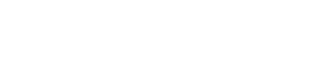
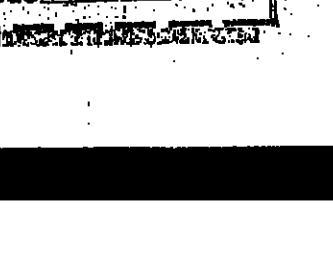
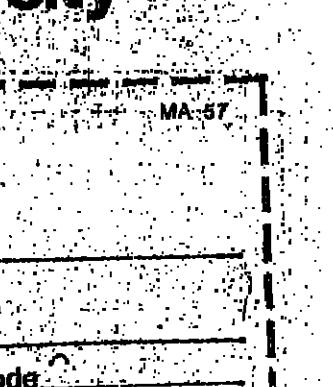
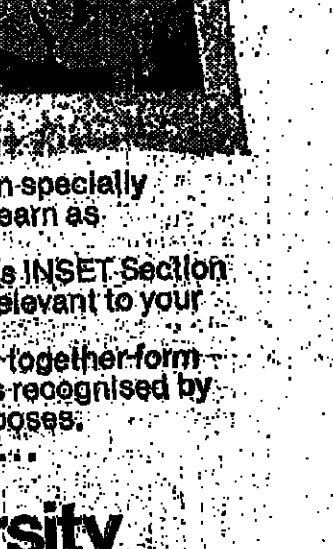
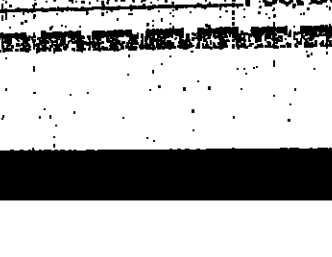
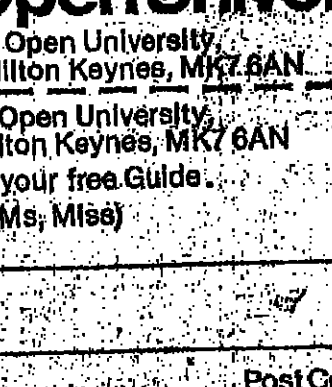
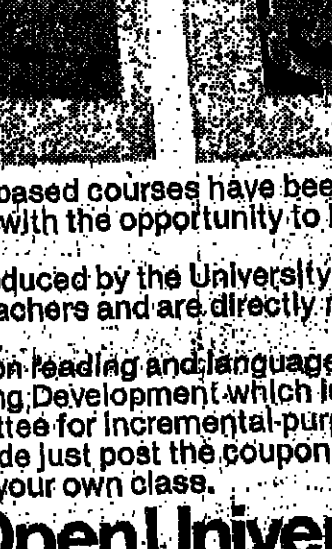
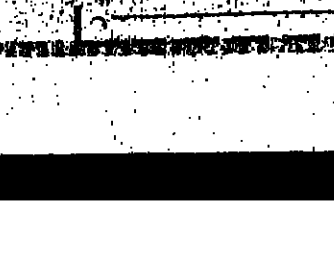
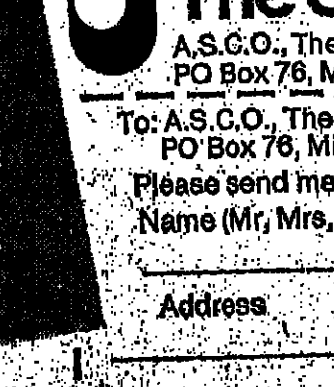
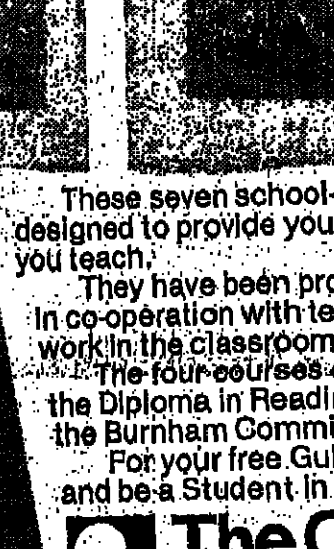
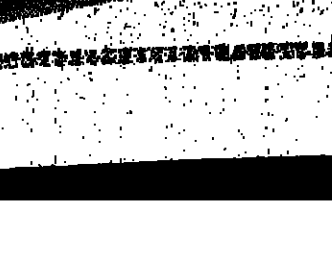
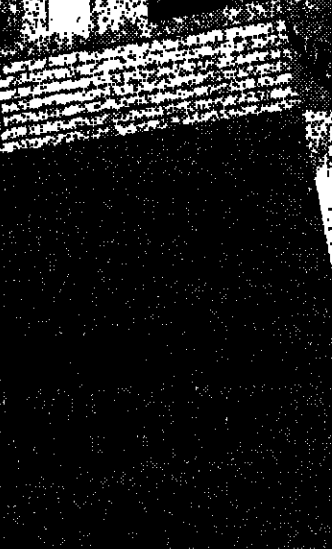
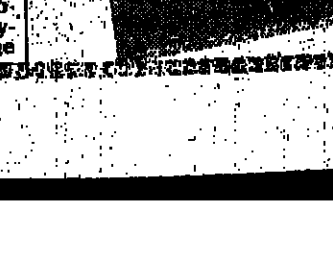
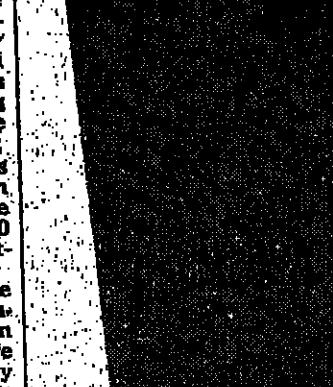
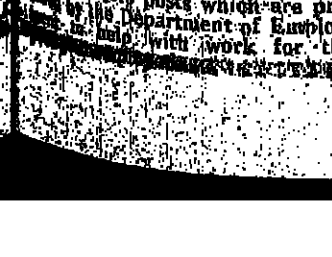
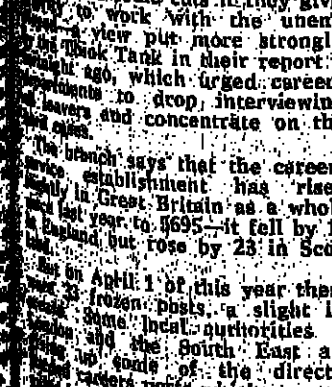
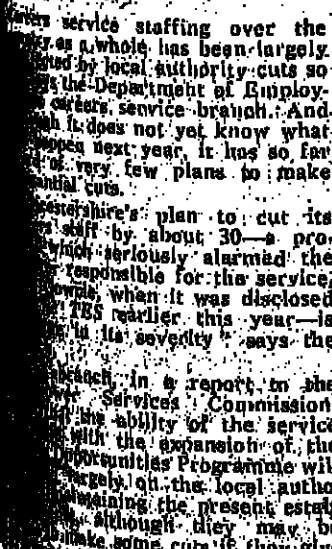
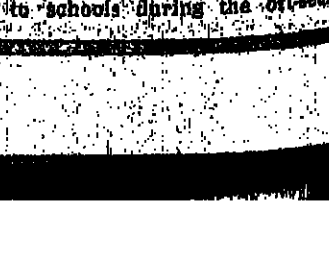
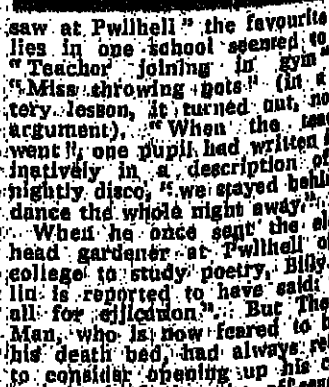
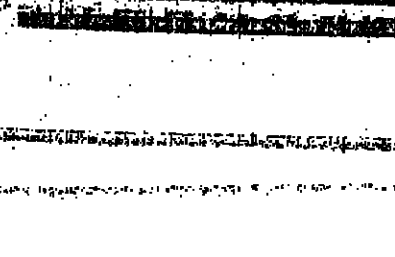
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In the evenings after the coaches roll back to camp, the children are thrilled in the bars and coffee shops, with up their projects or diaries. Under the heading: "The funniest thing I

saw at Pwllheli" the favourite item in one school seemed to be "Teacher joining in gym". "Miss shouting gets" (in a parody lesson, it turned out, not an argument). When the same event, one pupil had written: "Inevitably in a description of a slightly dim, now stayed behind, dance the whole night away."

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LETTERS

How to break the vicious circle of caning

Sir.—The sickening chronicle of brutality from your probationer teacher must surely evoke revulsion. There seem to be four possible alternative explanations:

- (a) Conditions in schools and society make teachers feel insecure, frightened and savage. Violent teachers therefore deserve the same sympathy extended to violent youths.
- (b) Conditions in schools and society are not as bad as that, but teachers are of a psychological type that reacts as if they were.
- (c) The truth is a combination of (a) and (b). "Just because you're paranoid, it doesn't mean they're not out to get you."
- (d) Teaching attracts sadists. An effective ban on corporal punishment would cause massive voluntary redundancy.

The probationer's school seems an ordinary sort of place. The leading teachers are of a religious, authoritarian and games. Assemblies are very formal. Uniform is compulsory. Children are vulnerable and pathetic, with nothing more dangerous on their minds than the smothering of their parents' buckets. Teachers communicate from homes in setting of bucolic peace.

There is no sex education. We are not told that art consists of copying reproductions and that drama is reading Shakespeare round the class. Such schools are described so often that it is a shock to find that one actually exists.

Yet there is a serious moral problem here, however for we are driven to scepticism by vivid abolitionist commentary. For relations between teacher and pupil to

reach the level of violence is a tragedy, whatever the cause.

As the probationer clearly shows, it is a tragedy as large as human nature itself. For he denies my explanation (b) and (d)—that the teachers are psychological freaks; on the contrary, they are "very normal".

Again, every school described by STOPP where caning has been abolished has experienced a marked improvement in discipline. Only victims of exceptional and universal pervasively would persist in using brutality which does not work in preference to gentleness that does.

Why has no violence vanished from society? Darwin and Skinner have alike contended. Original sin must be the answer. Evil has become natural. Society and its schools, teachers and their pupils need moral renewal from a supernatural origin.

All this being so, a change in the law, however desirable, will not in itself stamp out violence, any more than it has stamped out racism. A change outlawing violence by teachers would have to be balanced by legal redress against violent pupils and their parents, as the case in many non-caring Continental countries (see The Pack Report, TESS, March 28, 1977).

Wastepaper baskets are not the only victims of pupil violence in the world. This means the end of the teacher in loco parentis; he becomes rather an agent of citizen's arrest.

RICHARD WILKINS,
Secretary,
Association of Christian Teachers,
London, EC1.

Sir.—As a probationary teacher in a school, which—thank goodness—bears no similarity whatsoever to John Willis's, I read his article (May 30) with a mixture of sympathy, disgust and relief that I have not been forced into the unenviable position of being author of something similar. However, the article (and Angela Newnester's accompanying one) made me reconsider my long held abhorrence of corporal punishment in a way which surprised me.

Having taught in a German school I know that corporal punishment is not indispensable. I am nevertheless beginning to realise how justified many headmasters are in opposing global bans within their LEAs for as John Willis's evidence proves so tragically, corporal punishment creates a vicious circle which is horrifically impermeable and which lasts through generations affecting parents and teachers alike.

Graduates of schools with punitive regimes await and approve of the perpetuation of the sanctions they know on their own children—for they know no others. Similarly the teachers cannot function without it, for they are not trained to do so—I certainly was not a year ago.

So, before we can even consider a uniform ban, a programme of in-service training on an unprecedented scale will have to be mounted. This must instruct teachers how to counsel and what alternatives to punishment there are. It must also train us how to explain to parents what we are doing. Or then can we ask teachers whether they are prepared to take perhaps the bravest step

yet in educational reform—for a ban on corporal punishment will inevitably cause a temporary backwash of difficulties which will test us to the extreme.

Although I have been loath to make these suggestions which could delay the abolition of these cruel punishments I am sure that teachers' opposition is due to ignorance about alternatives. It, nevertheless, goes without saying that the vicious unofficial sanctions of John Willis's school and others like it must continue to be publicized and attacked.

B. P. LIGHTMAN,
Henderson Road,
Broadfield,
Crawley,
West Sussex.

Sir.—The statement attributed to me in Angela Newnester's article on STOPP (May 30), that my own school is the only school of 30 in the borough where there is no caning is perhaps open to misinterpretation.

As far as I know, we are indeed the only one of the borough's 23 mixed or boys' maintained secondary schools to have abolished corporal punishment officially. There are, however, about 10 other secondary schools—mainly denominational or girls'—who also have no record of corporal punishment in recent years.

The point I was making, that discipline second to none is possible without using corporal punishment, is unaffected.

COLIN BAGNALL,
Secretary,
The Society of Teachers Opposed to Physical Punishment,
10 Lennox Gardens,
Croydon, Surrey.

Salaries by Choice must be maintained

Sir.—After Clegg, the Think Tank, the recent proposals regarding differential payments for teachers in "shortage subjects" qualify for a speedy demise?

The mind boggles at the implications of such payments. Advancing the magnitude of the crisis would have to be a constant "extra" payment (the Tank supplement?) available for a limited number of teachers.

There would, of course, be a retraining programme, with a mix of mathematics and other subjects and a shortage of teachers. The Tank supplement would be transferred to training could commence, as Mathematics and Science teachers realize that their true vocation is to teach mathematics, which they may be.

Teachers of "shortage" subjects would be paid more than those teaching "non shortage" subjects in inner city social problem areas. This would be an ideal way of creating bad feeling within the profession, which is unaffected.

Of course what the Think Tank have completely overlooked is that a mathematics teacher is primarily a teacher, and secondarily a mathematician, and the present proposal would involve paying different salaries for the same work, i.e. the same number of hours.

It is important to realize that the Council officers (only a proportion of whom are directly involved in English language teaching) is far exceeded by a steadily increasing body of highly professional, well-qualified and career-oriented English teachers. This fact is merely stated in the Council's operations in Egypt. Nine council officers and

over 20 education contract staff work in Egypt. It is surprising that this is not a reference in the whole of the "Extra" to this large body of expertise on whose dedication, hard work and flexibility the success of the council's English language teaching operations abroad largely depends. It is not difficult to see, moreover, that the effect of cuts on contract staff could be far more devastating than on career officers. At present they have no pension scheme nor any guarantee of reemployment on termination of contract.

We heartily endorse the suggestion that English teaching is an important and undervalued commercial export and approve of the council's intentions to streamline large teaching operations. We would, however, request a more consistent attitude, and recognition of the role of contract teachers in ventures.

MIKE BEAUMONT, Hon. Secretary,
CLARE BEAUMONT, Committee Member,
Overseas Contract Teachers' Association (OCTA).

Sir.—I note with interest Mr. Neil Kinnock's proposal that public schools and other areas of private education could be asked to repay the state for the cost of training teachers.

It is not clear how this would be financed, but it is a proposal which would be a steady stream of income to the state. It is a proposal which would be a steady stream of income to the state.

Reimbursement Pandor's Box

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Keep cruelty off the curriculum

Sir.—I am depressed to read the proposals by Mr. Neil Kinnock, Secretary of the Open University, that the curriculum should be "enriched" by including "cruelty" as a subject.

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Sir.—The work of the British Council is indeed little known and undervalued by the general public. Your "Extra" (May 25) is therefore a valuable and timely contribution to the public understanding of the work of the Council.

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St Paul's primary needs

Sir.—As a teacher who works in a primary school on the edge of St Paul's, Bristol, I was shocked and saddened by the statements of Sir Gervais Walker, Chairman of Avon County Council, made to the Parliamentary sub-committee which visited St. Paul's recently (May 30).

It is a pity that the visit of Sir Gervais was not made in St Paul's. It is not being made in St Paul's. It is not being made in St Paul's. It is not being made in St Paul's.

I was present at the public hearing when the three headteachers gave their evidence. I think the schools are in St Paul's. I think the schools are in St Paul's. I think the schools are in St Paul's.

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whether this statement is in fact true. Secondly, it was not properly made clear that the school in question is the only remaining secondary modern in the whole of Avon. Over recent years the school has, rightly or wrongly, gained a reputation as a "sink school", and many parents, particularly white parents, have avoided sending their children there.

Even if black children were doing better than white within the school, this would not prove that black children throughout Bristol are doing as well as they should be.

I am the secretary of a NUT sub-committee in Bristol which is currently preparing a detailed report to be submitted to the Divisional Council of the NUT, on educational provision for families in St Paul's and on the authority's approach to multi-ethnic education throughout the county. I personally hope and believe that this report, which we hope to publish in July, will seriously challenge the complacency and self-satisfaction of Sir Gervais Walker, and the regrettably large number of senior county officers who take a similar defensive line.

IAN MENTER,
Secretary, Equal Opportunities Sub-committee,
Bristol Teachers' Association (NUT).



"We are wearing a box aren't we sir?"

Energy syllabus in preparation

Sir.—At the end of his recent letter about energy education and energy conservation in schools and colleges John Gray, of Blackpool and Fylde College, Furness and Higher Education, asked readers to suggest ways in which energy education could best be promoted. The Association for Liberal Education has made considerable progress towards answering this challenge.

Over recent months the association has enlisted the support of industry and educational groups such as the National Extension College towards developing a teachers' handbook for energy studies for the post-16 age group. A programme of three intensive weeks of work in the energy area at Cambridge University, commencing in February, 1981, utilizing expert advice from industry, government and education has been developed. The aim of the three weeks will be to prepare and publish an energy studies syllabus suitable for a wide range of courses to acquaint members with a range of suitable materials that may be used in the classroom.

Our thinking behind establishing this course is our belief that energy studies is so important it should be incorporated into the post-16 curriculum. Further, the association believes that at the moment general studies, as the most appropriate vehicle for the teaching of this subject element, is being through our work over the forthcoming months to examine the possibilities of teaching communication skills through energy-related materials. There appears to be a growing amount of material being produced for the able sixth-former but little real attempt being made to provide for the needs of the less able academically in the post-16 age group.

I would be pleased to hear from those interested in keeping in touch about our work in this area who might be interested in offering practical assistance. M. C. BOWEN, Secretary, Association for Liberal Education, 100, St. Paul's, Blackpool, Lancashire, PO13 1JH.

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I would be pleased to hear from those interested in keeping in touch about our work in this area who might be interested in offering practical assistance. M. C. BOWEN, Secretary, Association for Liberal Education, 100, St. Paul's, Blackpool, Lancashire, PO13 1JH.

Changeable forecast

Sir.—Ignoring Gareth Williams' various side-windings (May 30), may I point out that although the Education Report was criticized for underestimating the number of qualified school leavers, does it not invalidate this, as an illustration of the failure, by some critics to distinguish between the principles of stock reports and the modifications of precise numerical forecasts that changing circumstances may later make necessary?

LIONEL ELVIN,
Wolstone Gardens,
Cambridge.

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Tyranny of exams over drama studies

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Sir.—I note with interest Mr. Neil Kinnock's proposal that public schools and other areas of private education could be asked to repay the state for the cost of training teachers.

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* Published recently in Britain by
Dorset House (£6.25).

features



CASE for revival?

Continuing our pressure group series, Rick Rogers outlines some of the dilemmas facing the Campaign for the Advancement of State Education

Twenty years ago, a group of Cambridge parents complained in their local education officer that conditions at their children's primary school were "a public scandal". It was so overcrowded that one class was taught in a nearby hall with no proper heating, lighting or lavatories.

To their amazement they were told their children were lucky. There were many worse schools in the city. The education officer explained how the education system was funded, and who made the decisions.

That, in effect, was the conception if not the actual birth of the Confederation (now the Campaign) for the Advancement of State Education, which those parents set up to act as a pressure group to improve the quality of local maintained schools. Subsequently, a similar group was set up in Oxford, after a campaign over a new hall for a local primary school. Coincidentally, both schools were called St Andrew's.

More parents' pressure groups sprang up, in Brentford, Hornsey, Hampstead and Richmond. Local associations mushroomed in the north of England—Chester, Derby, Keighly, Leeds, Liverpool, Sheffield, Stockport. By the summer of 1962, about 26 groups were operating. In February of that year, a national joint committee for the Advancement of State Education was formed, to coordinate the local groups and to encourage others to start up. That was the birth of CASE.

The most common activities of these early groups were public meetings and study groups to collect educational data. What they concentrated on depended on local conditions—overcrowding, inadequate buildings, telling parents about schooling, charting local opportunities for school leavers. One major theme was the unfairness of 11-plus selection, though it was not, at that time, the main thrust of the movement. Two groups—Cambridge and Harrow—managed to get members elected as local councillors, and then on to the local education committee.

In 1966, CASE did adopt as national policy support for a fully comprehensive system. In 1960, when CASE began, less than 5 per cent of secondary school children went to comprehensives; today 85 per cent do.

By the end of the 1960s, there were more than 100 local CASE associations. The organization, nationally and locally, had become identified with three key issues—greater parental involvement in schools, the championing of comprehensive education and (sometimes ambiguously) greater parental choice in education.

The 1970s saw CASE go into reverse. Numbers declined, sometimes dramatically—105 groups in 1974, almost half that by the end of the decade. Since May last year, there has been some limited growth, linked undeniably with the Government's education policy.

How does CASE operate? Any local pressure group can become a CASE association, so long as it agrees to work within the terms of a national CASE policy statement. This is broadly based but firm: support for and improvement in the state comprehensive system; provision of information on schools and education policy; closer links between parents, teachers and local authorities.

The latter cuts both ways so far as CASE is concerned. "We recognize teachers as quality professionals; we expect them to recognize parents as valuable assets and equal partners in the education of their children" was how one CASE member put it.

The CASE policy statement also details opposition to corporal punishment, streaming and secret school records, and

opposes an increase in the proportion of church school places over county places. Not all members support every detail of the policy—and one can privately tease out the odd streamer or heater, or doubt to full access to records. But the broad support is there.

There is also a CASE parents' charter, but many members increasingly insist that CASE should not be regarded as a parents' organization. Said one: "It is a movement for anyone who wants to work to promote and enhance state education. And that means good pay and conditions for teachers, as much as more parental control of schools."

A provision exists for groups to be expelled if they go down the wrong ideological path—none has. CASE, though, would not offer housing to a local group fighting to keep grammar schools or rooting for the assisted places scheme. Within that framework, then, local associations can act as autonomous units—running their own affairs, picking their own issues, deciding their own tactics. What unites them all is the wish to improve the quality of state education and to fight the education cuts.

The associations pay an annual levy of 50p per member (a minimum of £5) to the national CASE organization. There are, presently, some 50 paid-up associations with a membership ranging from a dozen to more than 200. The biggest groups have always been in Baffnet, Basildon, Enfield, Richmond and South Bucks. In all, there are almost 4,000 members including a hundred or so "national" members (people who join individually where no group exists). Some other local organizations affiliate to CASE—youth wives' groups, parent-teacher associations, branches of the National Union of Teachers. That would bring the total up to about 6,000.

What can national CASE offer local pressure groups? "Two major advantages are feeling part of a nationwide movement rather than a small isolated group of people, and having the opportunity to exchange campaign tactics and strategy," claims Diana Page, the CASE executive officer.

National CASE is run by an executive of three officers plus 15 additional committee members, elected by the associations for staggered three-year terms. Individual members have their own representative. In addition, there are three main sub-committees: policy and action, finance and membership, and public relations. CASE produces a newspaper, *Parents and Schools*, three times a year—25p a copy with a circulation of about 2,000.

The national organization runs on an annual income of between £1,500 and £2,000 a year. Last year, it was £1,854. But only between a half and one-third of that comes from the local association levy. "What keeps CASE afloat," says national treasurer Jean Duke, "is the cash it gets from the sale of Home and School Council booklets."

The Council was set up in 1967 jointly by CASE, the Advisory Centre for Education and the National Confederation of PTAs, as a coordinating body for home-school relations. It has become exclusively a small publishing unit—and, oppositely, patron saint to CASE, which last year benefited by over £1,000.

There is another source of income—a three-year grant from the Department of Education and Science, worth £3,500 a year. It goes on a part-time executive officer. Started last September—but agreed to near the end of the last Labour government's term—it has been a useful shot in CASE's administrative arm. (CASE does not have charitable status, so much potential funding is blocked off.)

The DES grant allows more time and

energy to go into encouraging and nurturing new and ailing associations, provides a central and permanent contact point, eases the burden on hard-pressed voluntary workers, and has provided part of that essential pressure-group armoury—good and efficient office equipment.

Who joins CASE? The organization is non-party political, though—inevitably perhaps—the majority of its members tend to be Labour supporters rather than Tory. The age range is predominantly mid-thirties to late-forties, some in their fifties; mostly middle class. Most become interested through their children's secondary-school period, joining as parents with a stake in the education system. Some stay on after to continue campaigning on the broader social/political front. Many are there for both reasons.

It attracts many teachers and others professionally involved in education. Teachers are in the majority on the national executive, although CASE chairman Tony Mitchell (a Bedford further education lecturer) maintains this "doesn't seem to be reflected in the direction of the discussions—and it does help the expertise."

There is widespread member commitment to the comprehensive system and "considerable hostility" towards independent schools. Nationally CASE has been harrying the BBC over its recent spate of programmes extolling the private school sector: from Westminster, through Eton, to Radley.

A few members still, quietly, send their children off to the private sector. After a bitter public row in 1974 over a prominent member's private-school preference for her child, the issue is now left up to a member's conscience. No such member would be expelled—or gain office. (The same would usually apply to grammar-school parents.)

Over the years, national CASE has seemed to move leftwards educationally. But that is as much due to the rightward lurch of Tory education policy and the insipidness of Labour's CASE has, conveniently, been called "centrally populist."

But CASE has problems. It is struggling to engineer a revival. The best times were in the sixties. There was a CASE representative on the Flowden committee on primary schools. CASE made a substantial contribution to the fight for comprehensive reorganization. It helped to put parents clearly and indelibly on the education map. Vigorous, effective and well-publicized local campaigns gave credibility to the national voice.

Yet CASE failed to capitalize on these successes. Through the seventies, enthusiasm waned and associations collapsed. Some, like Sheffield, disbanded because it was felt there was nothing left to fight for. Four thousand members out of several million parents and teachers, 50 groups spread through just one-fifth of the 104 English and Welsh LEAs (nearly a third of the groups in the London area)—it seems a poor return.

Tony Mitchell puts it down to complacency after the return of a Labour government in 1974. (It is a mistake CASE will not make again.) But other reasons are put forward.

First, the sharp elbows of the middle class hurried on both the comprehensive cause and CASE's. In 1975 Maurice Kogan described CASE as "expressing the middle-class support for the public system of education." That support began to fade away—many lost their nerve when problems persisted after going comprehensive; the political consensus in education started to break up. CASE's fortunes seem inextricably linked to the degree of support for the state system by the middle classes—and by the media.

Second, financially and administratively

CASE was ill-equipped to develop. For every new CASE group established, five, sometimes 10, other campaigns would spring up—outside the CASE umbrella. National executive member Ann Kay points out: "CASE is not of money that it is difficult to let people know that CASE is there."

The DES grant has helped, but only a three-year pump-primer, and have not just to be replaced but enhanced from other sources. One scheme discussed is to set up a research fund which could attract otherwise unusable funding. A fund-raising drive is now on, to bring in £10,000 by the end of the year. That will go to publicity and recruitment campaigns in the north-west and west Midlands.

What then of the future? A revival has much to recommend it. Years in the field, established contacts, reserve of talent and expertise within ranks, a potential to weld a cross across divides—political, social and national—in the cause of state schools.

Crucially, CASE is taken seriously by administrators and educationists. Newsam, education officer for the London Education Authority (and a former CASE member) says: "I consider CASE as 'great harrier' people who work in education offices. Ultimately, no one much minds pulled up by people with the proper credentials; namely, that they know facts and care about children's education."

Troically, the Tories have done a power of good. New groups have set up, a lobby on parliament and in the House of Commons has been organized. The NUT have warmed to CASE as a common enemy. The usual voluntary group squabbles have been submerged by a newfound unity.

Three particular issues concern CASE. How can they create the organizational springboard to become a nationwide force in, first, defending then advancing state education? CASE defines its aims and beliefs as: to establish a clearer identity for example, playing down the part role in favour of promoting an all-round movement for state schooling? Should it collaborate more closely with other consumer groups—most notably the Advisory Centre for Education—to the point of amalgamation? By now, overtures have been halfhearted.

For Joan Sallis, long-time CASE member and a parent-member of the Taylor Committee on school government, there is an acute tactical dilemma CASE is in the coming years.

"We are inhibited from being too strongly critical about state education because we are being forced to do it with our backs to the wall, in the name of the cuts and the forced to be the argument on ground not of our own making. For we have to spend so much time trying to prove the state system can feed the closed circle of professional careers, instead of arguing what it isn't doing for the great bulk of our children's efforts. Our national whole efforts earn our national whole efforts."

Rick Rogers is education correspondent of the New Statesman. The Campaign for the Advancement of State Education can be contacted through Diana Page, Little Heath, London SE7 (01-317-7111 or 01-317-186). Headington, Oxford OX3 0BS (0865 64956).

Giving people a voice

The Arts Council literature panel thinks their work has 'little, if any, literary merit'.

Others, including many teachers, think otherwise.

Liz Heron looks at the work of the Federation of Worker Writers and Community Publishers

STEPNEY WORDS I & II

Dolly Davey



A Sense of Adventure

A decade of local publishing, from Stepney Words to the People's History Group.

Once a fortnight about a dozen people gather in a small room above a community bookshop in east London, bringing with them poems and stories they have written. The Hackney Writers' Workshop has several productive years behind it and all of its members have some published work to their credit.

On a typical evening perhaps three or four people will read out new pieces of writing; comments and discussion follow. Familiarity means that criticism and encouragement are exchanged with a minimum of inhibition. Someone reads a few poems from a newly discovered volume of South African poets; the group devotes some time to reworking one writer's story for dramatization at a public performance; there is news of an evening of poetry by black writers as part of the local Caribbean week.

Every week for the past four years a small group has met in a Nissen hut on a Bristol council housing estate. "They are writers. Their first collection of work, *Corrugated Ironworks*, has just been published by community publishers Bristol Broadside.

A library in south London's Waterloo is the focus for the People's History Group, many of whom are pensioners, with several in their eighties. They have been meeting since January of last year, and their first publication came off the presses this February. Entitled *A Sense of Adventure*, its author is pensioner Dolly Davey, an activist in the local tenants' action group's battles against developers in the Coin Street Planning Inquiry.

The growth of office and other developments has changed the face of Waterloo in recent decades, sapping the vitality of the community by impinging increasingly on shops, housing, schools and other services. Jane Mace initiated the People's History Group as part of a Community Education Project to document people's memories of the area before the war. The group meets as a VERA class and a great deal of material has been put out on the web. Some of it has fed into other local projects—the Young Vic Careers Project, which produced a show based on the group's memories of work.

Each of these writers' workshops belongs to the growing Federation of Worker Writers and Community Publishers. Since the appearance of *Stepney Words* (to become a cause célèbre) and the first publications to come out of Hackney's Centreprise in the early seventies, writers' workshops have blossomed up and down the country. Seeing the need for more contact and support between local groups, representatives of some of them formed the federation in 1976. It now has more than 30 member groups, with an estimated 400 writers.

The reasons for the spread of the writers' phenomenon are various. Some have come from the distribution of publications through the network of community bookshops—often linked to a print resource, publishing project or community newspaper, like the Aberdeen *People's Press* and Brighton *Queenspark*. There are two to date. Writing, an anthology published in 1978, and *Phoenix Stories*, a small collection of writing by children from Phoenix School, dedicated to the memory of Blair Peach, who had been a teacher at the school and who for several years had encouraged and published children's writing. The Federation

saw its beginnings when a tenants' group approached community workers for help with writing leaflets during a rent strike. The result there, thanks to a lot of energy and commitment, is the Scotland Road Writers' Workshop and Adult Education group, which has three paid workers funded by Inner City Partnership money.

Scotland Road has organized public poetry readings and touring performances of plays written by workshop members, as well as the publication of a magazine, all of which has engendered a proliferation of new workshops in the Liverpool area.

Elsewhere, workshops have also been a catalyst for other activities like anti-nuclear and environmental campaigns. Sales of publications are high, given the usually limited local distribution. Quarters are through the trade unions and Trades Council meetings, maybe a stall in the Co-op or the market, if there is not a bookshop.

Mike Kearney, the federation's national coordinator, attempts to keep groups in touch with one another. He travels the country visiting groups and attending meetings. There have been poetry readings to London, Bristol writers to Manchester, weekend workshops organized, where writers have converged from all points, an annual conference, committee meetings, international contacts.

National publications are a logical step in making work more widely known. There are two to date. Writing, an anthology published in 1978, and *Phoenix Stories*, a small collection of writing by children from Phoenix School, dedicated to the memory of Blair Peach, who had been a teacher at the school and who for several years had encouraged and published children's writing. The Federation

is preparing a new publication on the theme "Them and Us". With publications that reflect what is happening locally links are forged in a chain that stretches across the country.

Where does "literature" come into all this? Clearly the principle of collective writing runs counter to the traditional notion of the individual author. It is writing as part of a process, rooted in shared experience and based on a desire to give it expression.

"We're questioning and challenging traditional concepts of literature," says Mike Kearney. "We're giving people a voice." In its constitution the Federation states clearly that its aim is to encourage working-class writing. Its purpose is to remedy the gaps and silences in how working-class experience is documented—to make people aware of how their lives are part of history and allow them to be a part of recording that history.

This way of looking at literature affirms its production (and its reading) as something that cannot be separated from material and social circumstances. Mike Kearney stresses that the collective focus of the workshop as a means of developing confidence and articulation is what matters even more than going into print.

However, it seems that these aims and approaches are far too much with conventional criteria for what is literature. As a consequence fundraising has become a major worry—financial difficulties are imminent with the end of the two-year Gulbenkian grant that made Mike Kearney's job possible. Applications to the Arts Council's Literature panel have met with rejection, and the rebuff that the work had "little, if any, literary merit" is a harsh judgment that could be seen as unfair given the evidence and quantity of praise and critical attention given to

individual authors within the Federation. Autobiography was the original impulse for much of the writing, and what some of the autobiographical accounts lack in refinement of style is compensated by their moving clarity and simplicity; alongside these are numerous examples of skilful writing that displays humour and subtlety, and poetry that is delicate, witty or angelically powerful. The Federation has taken issue with the Arts Council as a matter of principle, arguing that its definitions of what constitutes literature are elitist and discriminate against working-class writers.

But given the Federation's achievements, the debate in terms of literature, art and working-class culture (a complex one that is by no means cut and dried) becomes to a certain extent diversionary. That the Federation deserves continued support is beyond doubt. Its writers are producing a body of local history and working-class autobiography that has an active relationship to the fabric of life in the inner city.

The Hackney People's Autobiography has produced two volumes of *Working Lives* that span several generations; its work continues with researches on Hackney during the Depression, and a book on women working in the rag trade; a new "young writers' group" has been launched. Work like this is already finding its way into schools, and in some cases is being included on CSE syllabuses. Most importantly, the writing makes and inspires connections with working-class experience in a way that resists passive acceptance of how things are, in favour of understanding and taking some steps to change them.

The Federation of Worker Writers and Community Publishers is at the Co-op Guild Rooms, 69 Heaton Road, Newcastle upon Tyne, tel. 0632 761 351.

The art of austerity

A high-contrast, black and white photograph of a young child sitting on the ground, looking down at their hands. The child is wearing a dark, long-sleeved garment. The background is a textured, light-colored surface, possibly grass or sand. The image has a grainy, high-contrast quality.

Andrew Wyeth is not another Norman Rockwell. The son of a famous illustrator, he uses many of the illustrators' techniques, but the cover of *The Saturday Evening*

been said. Fortunately, labor are setting a new high standard in presentation of books—to hold, to look

remains virtually untouched, a model of its kind.



All this went by the board when it became clear that the chance of putting much work in school bodies such as the Arts Council was not very high. Sponsorship was not keen to be seen to be interfering in educational matters, while the Arts Council had no wish to see this kind of activity as a wasteful, expensive, luxury novelty. It was a pity, none the less, if there was to be any real term cooperation between teachers and performers could not be established somehow and if the shops did nothing else, it is at least exposed both teachers and performers to some of their real



Lingo

[illegible]

Town plan

They will learn with horror that there is not one kind of local style to be argued about, but a variety of them, formulated in different ways and for different purposes. The author guides us through the tangled web of legislation and codes, a wide array of cases, and the theories and relates these to the theories' actual concerns over housing, public open space, shopping, and community recreation. The author's analysis of design, planning, and control, and of the influence which planning can have on the actual design of buildings, is made clear. For a book with a title like this, it is a deliberately simple, and a surprisingly thorough, guide to the 'planning' which does not minimise defects and shortcomings.

Although widely different from one another, all four books contain many of the same ingredients: relationships with parents and family, early friendships that break up, pranks, adventures and punishments mixed up with schooling and teachers. Each of these books must have given pleasure to the writers and will give pleasure and information to some readers. But the stories in *A Day of Pleasure* are unique works of art, and therefore imitations, if further imitations of the other three can be expected, but should perhaps be discouraged.

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media Suburban pathways

JIM ANTHONY on programmes for local studies

RTV AND RADIO
Exploration Earth
BBC radio. Mondays, 2pm.
History Around You
Granada television. Mondays,
10.05 am.
Resource Units, Geography
BBC television. Wednesdays, 11.40
am.

There can be few junior or middle schoolchildren who have not attempted some kind of local study. It can be a postcard (a guided tour of the fire station, a traffic count at the school gates) or a detailed (a microscopic examination of the school environment, or a comprehensive reconstruction with models of what the High Street looked like in previous centuries).

In whatever depth the studies are attempted, success depends on such factors as the identification of the children with their area, the commitment of the organising teacher, and the quality of resources available to supplement school-produced workbooks.

The programmes under review are currently providing a useful range of background resources for one group of children with whom the reviewer is involved in an open-ended study of a London suburb. It will be realized that teacher and children have to be selective; not every item in every series is directly relevant to the chosen area or approach taken.

Exploration Earth is a wide-ranging general interest series which this term has contained plenty of food for thought for the city or suburban child. "How can we improve the environment?" approached the problems of inner-city decay and neglect via a depressing catalogue of dilapidation and pollution. "Tower Block" was a balanced account, including people who spoke of the peace and quiet in towers, as well as the views, alongside those who regard high-rise blocks as disastrous.

"There's a Lesson in a School" (radiovision) examined the child's closest study area, emphasizing the older type of building which is a legacy of the links between church and school over the last hundred years. For every child listening to *Exploration Earth* in modern buildings there must have been two others directly relating to the school corridors filled in lavatory brief, with the sky glimpsed through high windows. School as a high-way was an interesting study to relate the traffic flow within a school to the street outside.

The second half of the term practices two more programmes for local studies. *Stop, Look and Listen* looks at all the people who contribute to the school day. The title of "Where can children

play?" is self-explanatory. The term ends with programmes on a trip to Longleat and activity holidays. This is a worthy series, but one annually hopes that the producers will one day abandon the tedious pop-style chattering that passes for music, even if it is only used in brief snatches.

History Around You is a repeat of a series which began with "Hunt for clues" in the Everton area of Liverpool. As with London and Westminster, it was found that Everton and Liverpool were once separated by fields, but it was still possible to find the village green. The village in the second programme offered church, schoolhouse, almshouses, inn and traces of cottage industry.

Schools within reach of castles or canals would have found the third and fourth programmes of direct interest, and the last before half-term was the Liverpool to Manchester railway. Reverting to studies of more general appeal after half-term, this leisurely-paced but colourful and well-presented series ends with "School Clues", "Terrace of Houses" and "Hospital".

History Around You is competently handled by its teacher-presenter Allan Waplington who measures the content of each film to cover a reasonable variety of points without overloading it, and who appreciates that the voice-over is usually better than the talking head.

Resource Units have been running this year on several subjects. This term it is Geography's turn, with a series aimed at 11 to 13 year olds. The five unrelated but carefully chosen topics are offered mainly to schools with videorecording facilities. The titles are "What the Ice did" (glaciation in Britain), "Routeaway" (geographical factors determining the routes taken by canal, railway and motorway across the Pennines), "River Landscape" (a profile of the Tees); "The Iron Age" (Roman and Saxon), and "Story from Ghana".

It should be emphasized that even in an excellent programme such as "What the Ice did", there is only time and scope for a limited look. The film concentrates on outwash and machine products of the ice sheets and how they are used today. There would seem to be scope for more resource series for VCR users; half a dozen films on a related approach to, say, the physical geography of Britain as seen from the air would be of incalculable value.

Apart from the series reviewed here, it pays to look around the schedules to find further material of use for local studies. *Stop, Look and Listen* has featured "Airport", "Safari Park" and "Railway Station", for example.



Life with a latchkey

The notion that latchkey children are at best deprived and at worst deprived has been coming under fire. Independent-minded groups of kids having adventures are basic to children's literature, but recently they have included working-class families whose parents cannot provide sailing dinghies or country house holidays. These kids go in for adventures in the city.

Now one of the books has spawned a television series: *The Latchkey Kids* (Thames, Mondays, 4.45 pm). In six episodes, five kids save the tree in their playground from being replaced by a concrete car park. They go to County Hall and the Houses of Parliament, they set up meetings and finally they persuade the crucial adults that the tree should stay. One cannot but applaud the basic idea, but ideas alone are not enough, and in *The Latchkey Kids* there is only one and it is not nearly enough. It is indisputably excellent for kids to be independent and worthy, but this is an unprepossessing bunch with about as much visible concern for their trees as most of us have for the fate of the yak. Hard to blame them when the tree is a gnarled dead thing which they hardly ever climb on.

The book was written in the early 1960s and has had one of those patchwork updates beloved of adaptation for television. It includes

slightly trendier language, two enemy punks and involvement with a television crew, but leaves in attitudes which have changed, retaining, for example, an unfashionable scorn for the needs of the single parent. The storyline has some extraordinary non-sequiturs, and there is some very extraordinary adult behaviour.

When the children go to County Hall the receptionist ignores them so they unplug the switchboard. One might expect fury to follow, but after a very brief moment she is directing them nicely to the offices they need. At once they forget where they are meant to go and, wandering around the building in a fairly defensive mood, they meet nothing but friendly advice, nods and giggles. One has enormous admiration for the people at County Hall, heaven knows, but this is pushing credulity too far.

All of which is a great pity because the latchkey as an image or as a way of life needs looking at quite closely. It is fine to suggest that kids can get on and do useful things, but in doing so we are ignoring the many who cannot. What happens in winter? Are we saying that kids do not need sports clubs, late access to school facilities, places just to sit and talk? If so, we are in dangerously complacent ground.

Frances Farrer

Briefings Radio and tv

General interest

Education Matters (Sunday, BBC 1)
Peter Newsam, chief executive of ILEA, looks at the major issues in primary education.
Shakespeare in Perspective (day, 16.00 VH F4)
Repeat of the series on broadcast with the Shakespeare productions. Personal are given by leading actors.
Can We Teach Jobs? (5.16.30 VH F4)

How can a new approach to relationships at work help make a success? This series the way, featuring various community enterprises.

For schools

Mathsday (Tuesday, 9.35 BBC 1)
Eleven to 13-year-olds follow footprints across a map to conventional map symbols. "of Scales" demonstrates how to interpret models, plans and maps.
My World (Wednesday, 9.52 BBC 1)
Solid, hollow, floating, sinking, helps four to six-year-olds work out the properties of objects.
The French Programme (Wednesday, 10.33; Thursday, 10.26 VH F4)
"Au Travail" continues with 16 to 18-year-olds ideas for holidays in France. In the programme, we visit a catering centre in Paris.
By the People (For the People) (Wednesday, 11.00 VH F4)

Is Britain's high standard of living threatened by her continuing dependence on oil? "Way to Survival" investigates the surrounding area.
Twentieth Century History (Wednesday, 14.18 BBC 1)

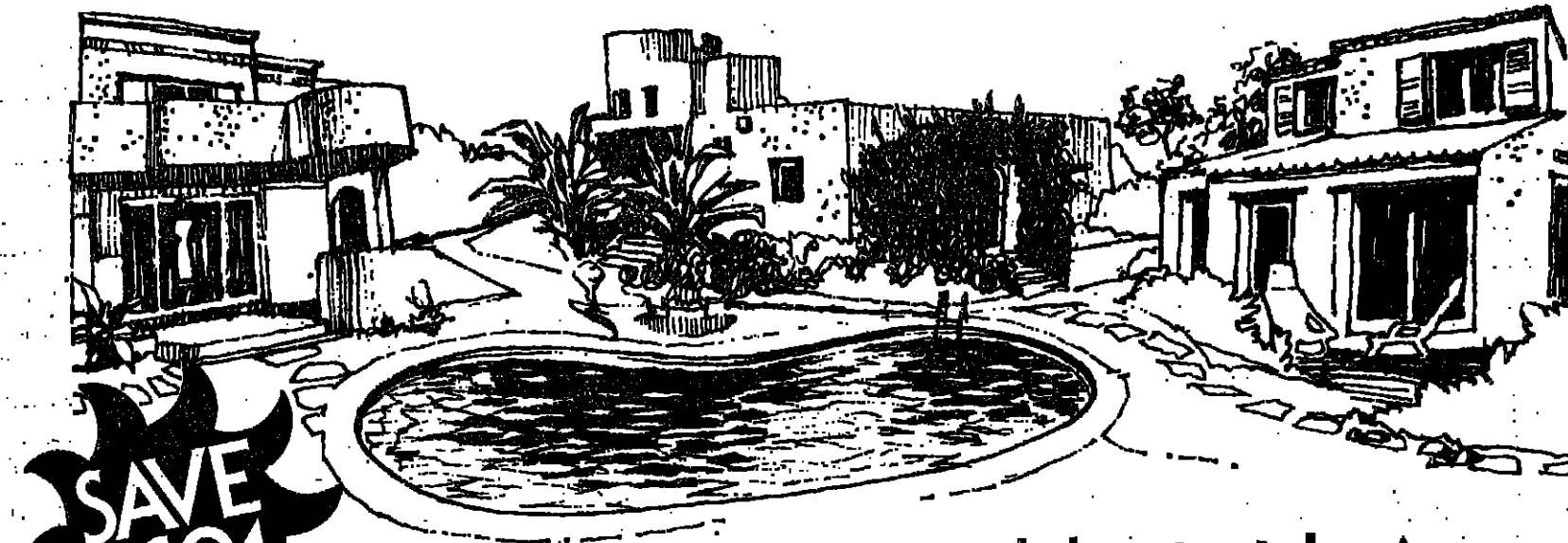
Fourteen to 18-year-olds are taken back to the problems of the background to the Arab-Israeli conflict.
Nature (Wednesday, 14.45 VH F4)
Eight to 10-year-olds follow their way along the seashore, finding one particular gull to Eric Simms explains how the ring gull rears its young and its population has grown.

Over the Top (Thursday, 9.35; 11.35 VH F4)
Different codes of behaviour expected from country to town and from children to adults. "Hers" makes 8 to 10-year-olds about the way they and behave.

Music Round (Thursday, 10.33 VH F4)
"Electric Phoenix" presents a programme of their own music, sounds and the latest electronic recording techniques, to encourage 10 to 13-year-olds to experiment with their own voices.

Stained Glass (Thursday, 11.40 VH F4)
Two A level physical geography examiners talk about how people are set.

HIGH SEASON HOLIDAYS AT LOW SEASON PRICES.



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holiday is ideal for families with children. And the offer applies to children, too! What's more, children aged between 2 and 11 on the date of departure also qualify for the standard 15% children's reduction, made on the May price.

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**£30 per person EXTRA off
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Gran Canaria**

All holidays are for 14 nights

RESORT	ACCOMMODATION	Accommodation Size	Party Size	Day of Departure	May 1-22	May 23-31	June 1-15	June 16-30	July 1-15	July 16-31	August 1-15	August 16-31	September 1-15	September 16-30	October 1-15	October 16-31	November 1-15	November 16-30	December 1-15	December 16-31	Guaranteed Prices per person from	Maximum Savings per person
COSTA BRAVA	Sirona Townhouses	2 Bedrooms	3-5	Tues	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£130	£97
COSTA BLANCA	Oire Apts	1 Bedroom	2-4	Thurs or Fri	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£144	£92
Benidorm	Inlesa Apts	1 Bedroom	2-4	Thurs or Fri	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£150	£82
Doris	Estadinho Apts	1 Bedroom	2-4	Thurs or Fri	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£105	£82
Albatros Apts	2 Bedrooms	3-5	Thurs or Fri	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£101	£29
COSTA DEL SOL	Bahia Beach Complex	2/4 Bedrooms	3-8	Mon	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£150	£73
Estepona	3 Bedrooms	6-7	Mon	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£100	£90
TRIZA	BA Argomasa Villas (with individual pools)	4 Bedrooms	8-8	Sat or Thurs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£150	£91
TENERIFE	Playa de las Americas	Twinbeds Apts	1 Bedroom	2-3	Wed or Sun	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£181	£52
GRAN CANARIA	Puerto Rico Apts (complex with pool)	1 Bedroom	2-3	Thurs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£195	£82
VENETIAN RIVIERA	Lido di Jesolo Apts	1/2 Bedrooms	2-5	Sat or Tues	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£117	£97
ELBA	Parlo Azzuro	International Studios	2-4	Tues	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	£147	£80

Party Size and Price

Prices vary according to the number of people in each villa or apartment. The prices quoted here are examples of final guaranteed prices per person for the largest party size for Gatwick or Luton departures. They include airport charges (£6.95 per person), holiday insurance (£6.05 per person) and surcharges. Surcharges vary throughout the season but are limited to a maximum of £20 per person.

ATOL 1528C

**Thomson
Villas and
Apartments**

Corgi dogs, cricket and tea breaks

ROY BLATCHFORD reviews "The English Programme"

STV
The English Programme
TV, Tuesday, 10.35, Friday, 9.30.

This term's "culture" unit marks an obvious and purposeful next step in *The English Programme*'s analysis of language, literature and the media. A revamped "Viewpoint" unit is promised for the autumn: in the meantime, there are four brave—some say foolish—programmes which set out to examine the increasingly complex relationship between popular culture on the one hand and "high" culture on the other.

To those familiar with Raymond Williams' work in *The Long Revolution* and *Culture and Society* the theoretical thrust is not difficult to trace. He identifies three abstract ways which describe a general process of intellectual, spiritual and aesthetic development: a way of life, whether of a people, period or group; and most recently the way and practices of intellectual and artistic activity.

What makes a culture or sub-culture, and which values are most cherished in society? If a school

curriculum represents a selection from these, who chooses and why? Out of a rich variety of interview, newsreel footage, case study, documentary film and studio sequences, the production team have created a bold and committed television enquiry.

Programme one on "British Culture?" (May 20, 23) opens with a collage of colourful images, courtesy of the British Tourist Authority, which is an amusing reminder of how our culture is the homogeneity of being British: corgi dogs, cricket and tea breaks. Against a backdrop of song and useful narration, there are forceful reminders of our cultural diversity, the power the advertiser punches in determining values, attitudes and prejudices, and the historical perspective. The overview is important to a young audience's full understanding, but there is a danger that the medium will cloud the message. Too much is done too quickly, and the parts cannot be disentangled from the whole.

In contrast, "Working People" (June 3, 6) is an affectionate collection of interviews with working Londoners which celebrates popular, multi-ethnic culture.

I doubt whether some 15-year-olds will be patient with the interviewees, and stereotypes could be horribly reinforced. But the programme's attempt to highlight the tension between cultural assumptions is clear-headed, and wisely geared to a wide range of possible follow-up classroom activities.

A similar interview format is used in "Women" (June 10, 13). Divided into sections on motherhood, marriage, housework, paid work and beauty, the historically determined role of women and the politics of male/female in our culture are examined. Stepping outside our own chauvinism is a useful way of coming to terms with it. "Images of America" (June 17, 20) juxtaposes extracts from American documentary films, contrasting the Hollywood razzamatazz and a commercial world in which politicians are laughingly sold like soap-flakes with the appalling conditions and struggles of a group of Kentucky farm-workers. The point, of course, is that films, swallow whole as an American culture as though it were a unified and simple thing. As in Britain, there is a patchwork of contrasting sub-cultures.

Are you alone?

by Victoria Neumark

FILM
Better Safe Than Sorry
144 mins, 16 mm, colour, sound, 1978

Available from Educational Media Australia, 25 Boleau Road, London W5. Tel: 01-998 8657.

"If you feel something strange is going on, use your brain!" is the advice of the winsome American pre-teenagers who narrate the text of *Better Safe Than Sorry*. If only it were as easy to get children to view the world with enough suspicion to protect themselves, worried teachers might reflect as they gaze out at figures in long raincoats hanging about by the school gates. This film is a laudable attempt to instill a critical awareness in children, but its efficiency is going to depend a great deal on how much preparation goes into its presentation. For example, after each of the six scenes, the presenters suggest a discussion point. As an excellent idea, but one which will depend for its success on the teacher properly mediating between the film's American setting and the universality of its subject.

Differences in life-style are more superficialities to an adult, but to a child's more literal mind they can

be distracting. The man hanging around while the kids play basketball and his tempting offer of a transistor radio needs to be translated into his frequent variant, the man who offers sweets or a chance to go and look at his secret "whatevers".

The film does cover most possible forms of child seduction: the lurker, the knob-crawler, the hitchhiker pick-up, the "friends of my parents" who offer a lift. Perhaps most spine-chilling of all is a scene where two young girls are left alone while their mother goes out and the telephone rings. "Are you alone?" says an officious voice. The questions rattle off with no time for the girls to pause and think. "What are you doing?" "Are you alone?" "Are you sure?" "Where are you?" "Phone goes dead, the man now well aware that two children are on their own in the house at night.

The film is usefully structured so that it shows such a complete picture of the danger, while the presenters' voice points out the danger of the situation, and allows time for discussion, and unfreezes again to show the scene child "using her brain" to tell her what has happened.

SECONDARY

A1 and Design continued

KENT COUNTY COUNCIL
EDUCATION DEPARTMENT
In the Kent County Council plan for the organization of secondary education, 11-12, 13-14, 15-16, 17-18, 19-20, 21-22, 23-24, 25-26, 27-28, 29-30, 31-32, 33-34, 35-36, 37-38, 39-40, 41-42, 43-44, 45-46, 47-48, 49-50, 51-52, 53-54, 55-56, 57-58, 59-60, 61-62, 63-64, 65-66, 67-68, 69-70, 71-72, 73-74, 75-76, 77-78, 79-80, 81-82, 83-84, 85-86, 87-88, 89-90, 91-92, 93-94, 95-96, 97-98, 99-100, 101-102, 103-104, 105-106, 107-108, 109-110, 111-112, 113-114, 115-116, 117-118, 119-120, 121-122, 123-124, 125-126, 127-128, 129-130, 131-132, 133-134, 135-136, 137-138, 139-140, 141-142, 143-144, 145-146, 147-148, 149-150, 151-152, 153-154, 155-156, 157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 173-174, 175-176, 177-178, 179-180, 181-182, 183-184, 185-186, 187-188, 189-190, 191-192, 193-194, 195-196, 197-198, 199-200, 201-202, 203-204, 205-206, 207-208, 209-210, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 223-224, 225-226, 227-228, 229-230, 231-232, 233-234, 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extra First, find your computer

BRIAN JACKSON on access to computing power

Computer-related activities which are going on in schools include: computer science, computer-aided learning, computer-managed learning, computer control of processes and computer information systems. All these activities demand that teachers and pupils have access to computer power. It might seem that the emergence of the "cheap" microcomputer has solved the problem of computer power in schools but unhappily this is not the case. The following are the principal ways in which schools currently get hold of their computing power. There is batch processing on a remote machine. Here the computer which processes the work for the pupils is likely to be many miles away from them. The computer could be situated in the local authority office, a technical college or a specific educational computer

advisory unit. Pupils prepare their work for input in various ways: written documents, punched cards, punched paper tape, cards which are coded with pencil marks made by the pupils (mark-sense cards). At the end of the day all the pupils' work is batched together and sent to the computer centre. If the sending involves posting then it could be several days before the pupils see the fruits of their labours or the error of their ways. Batch processing may seem very dull and old-fashioned but it does have considerable advantages. From the school's point of view it can be very cheap as little or no equipment is essential if mark-sense cards are used. Pupils can prepare work at their desks and a class of 30 pupils generate little more of a problem than a class of 10.

There need be no bottlenecks in the classroom, e.g. queuing for the use of a terminal. It does, however, demand that pupils and teachers build up an efficient clerical system. It is the lack of such a system which often leads to the belief that batch processing is unsuitable for schools. Without it computer output can be chaotic. In a school office for several days; and poor program documentation by the pupils means that they find difficulty in relating the output from the computer to what they expected. Yet to observe a school using a batch processing system well is a delight and it must be stressed that there are many examples of schools where pupils prepare projects for computer science examinations via batch processing alone, resulting in work of the highest standard.

After batch processing comes the on-line terminal in a remote machine. Here a device which looks

and acts very much like an electric typewriter connects with a computer via the ordinary GPO telephone system. Although a terminal can consist of a keyboard and television type screen (visual display unit) most schools have a teletypewriter as their first terminal to enable pupils to take away a printed record of their efforts. Of course, a terminal costs money: at the moment a minimum of £700 plus a further £170 for an acoustic coupler to allow the connection with the telephone system. On top of this there is the cost of the STD telephone calls, the maintenance of the equipment (approx. £100 per year) and the reconditioning or replacement of the equipment every five to seven years.

There will be a charge for computer time if the use of a commercial bureau is contemplated. The running costs of one terminal for four hours a day over 30 weeks in the year could never be less than £500 and this assumes a local call to the computer and no charge for computer time.

The great advantage of the on-line terminal is that it allows the pupil to interact with the computer directly. On-line program testing is generally much more fun for the pupil. A simple mistake by the pupil, for example, typing a comma when the computer needs a semicolon, is reported to the pupil immediately. This is in contrast to batch processing where it could be a week before the drama of the misplaced comma unfolds.

The use of computer-aided learning material via a batch system is very limited as the learning process is very much associated with feedback and reinforcement. The on-line terminal allows a dialogue to



take place between the pupil and a computer, ensuring accurately between the pupil and a computer program. Clearly, however, the educational value of this dialogue depends upon the quality of the computer program and at present there is not much good learning software about. Happily the on-line terminal is stimulating more and more teachers to write learning software.

Much of our understanding of the world follows upon systematic recording of data which is examined and structured. Normally such activities are province of the sophisticated researcher, but there are examples of schools using a central computer via an on-line terminal to do such work.

Of course the service offered by an on-line terminal is very much affected by what computer system it is on-line to. Many batch systems allow the use of a variety of programming languages and access to quite large file storage. This can be true for on-line service but there are many instances where on-line access is restricted to the programming language BASIC. As the on-line terminal can only partially solve the access problem, many schools currently using such terminals are also heavy users of a remote batch system.

The in-school microcomputer system might seem to have advantages over the on-line terminal but in fact choice of use offers much more than a terminal in a few ways it offers considerably less. Microcomputer systems can cost anything from £100 to £10,000 plus, so it is well to define a minimal system. Starting with the assumption that printed output of reasonable quality is essential for at least some applications in the schools, then there is an initial minimum expense of £600.

Assuming an eight bit system, then a processor with a minimum of 16K of usable storage is needed, particularly if it is intended to exploit some of the common computer-aided learning material. This adds a minimum of a further £700. Disk storage would be nice but costs about £1,300 so perhaps it would be better to settle for twin cassette drives adding another £100.

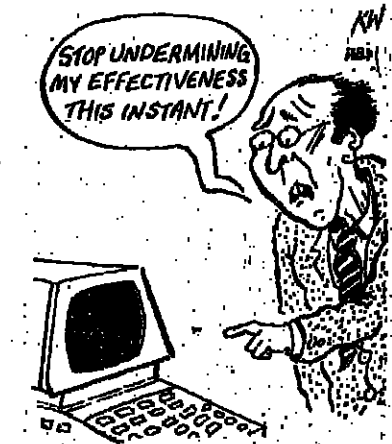
Therefore this minimal system costs £1,400 and would involve a maintenance contract of approximately £130 per year. Assuming a seven year life this system offers a "single terminal" computer power all day and every day for a running cost of £30 per year. It is still not a very sophisticated system, it only has cassette backing store which is slow and probably only offers BASIC as a language, but for the student of computer science it has one great advantage.

It is a complete computer all aspects of which are potentially accessible to the pupil. For example, for a study of machine language concepts (the fundamental mechanism by which all computers are programmed) then one no longer has to rely on bookwork or pseudo simulation; the real compu-

ter in the school has a real machine language which pupils can use. If the teacher wants to discuss how the memory of a computer is organized then it is possible to look and see. It is possible to set up controlled experiments and watch the contents of the memory change.

Very likely this minimal system will have some sockets in its back or side that can receive and send signals to other devices. For example, such a system could be used in school to control and/or monitor anything from chemical experiments to stage lighting. Such a microcomputer system would undoubtedly support rudimentary graphics. This means that it is possible to write programs which produce animated pictorial display on a television type screen. This is not a play feature but a valuable contribution towards the use of computer-aided learning material. For example, designers of road systems are interested in the process by which queues form. Programs have been written for schools which display on a screen the dynamic formation of such queues.

On the debit side, such a minimal microcomputer system would be slower than a conventional big computer with large arithmetic problems but this may only pose a problem to dedicated sixth form



mathematicians. The system would be painfully slow in dealing with files of data. The purchase of a floppy disk (another £800) would help to a considerable extent but a very large amount of money would have to be spent to make a substantial difference.

The real problem with such a microcomputer system is not technical limitations but the fact is that most schools could only afford one or two systems at the most. And any school wishing to offer its pupils examination courses in computer science or computer-aided learning across the curriculum, general appreciation in the lower school, real time experiments in science, etc. could face some serious bottlenecks even if it had half a dozen such systems.

There are some very impressive continued on page 31

Caution, costs and benefits

What circumstances should a school buy a microcomputer? DUNCAN MLEDGE draws some conclusions from the Durham Microcomputer Project

Computer education in co Durham schools began over a decade ago with the provision of an IBM 310 for Durham Technical College. Computer Unit and the formation of the County Computer Education Committee, with members drawn from both education and industry. Since then developments too numerous to describe have taken place, including the establishment of the Durham Microcomputer Project—a close study of computer education, uses and suitability of microcomputers in two of its schools—Framwellgate Moor Comprehensive and Woodham Community. Different microcomputers have been used in this project, including the Apple II, the Commodore PET and the RML 3802.

This project's initial three-year phase has produced a wide range of observations and software developments described in the Durham Microcomputer Project Report, which has been circulated to all Durham's secondary schools. The project's development activity has included various significant items of system software development, for example, a CBBI, interface, BASIC, graphics command language, and a PILOT interpreter, as well as a range of applications programmes for different areas of the curriculum, all of which have generated considerable interest, both in this county and elsewhere. So much demand has been expressed for BASIC, which runs on the RML 3802, that the

authority is to put it on sale to other L.E.A.s and institutions for wider distribution.

The project's observations serve to identify (or at least underline) some important considerations for schools in particular and education in general.

Most obvious is the need for any school contemplating buying a microcomputer to have already established its reasons for wanting one in terms of the foreseen uses/benefits of the machine and the level of staff commitment to developments in this area. Without being able to justify a purchase in this way, any school would merely be following a rather expensive and probably unrewarding trend. More- over without a statement of the foreseen uses of the microcomputer it is impossible to advise on the make, model and configuration of machine required.

Schools offering computer studies courses but with no computing facilities on site can easily justify a microcomputer. In the project, computer studies classes were the only regular users of the equipment for significant amounts of time, and commonly from teachers and pupils indicated that the microcomputer had greatly enhanced the teaching of this subject.

Use of the equipment for other subjects and for administration was much less significant. Although largely due to a lack of suitable software, this must throw some doubt upon whether in most schools such work could at present keep a microcomputer fully occupied or even reasonably well-occupied. Staff contemplating buying a microcomputer in schools which don't offer computer studies courses ought to look very carefully at the anticipated costs and benefit.

There is considerable potential for many applications in other subjects and in administration (the project software indicates that the microcomputer could perform a wide

range of useful tasks in these areas), but if the software cannot be acquired or created quickly, then the machine's potential is not worth a light.

Currently, the acquisition of programs is difficult and time-consuming. Schools are concerned with the range of software (at present not as wide as it needs to be), its reliability, cost, documentation, and transfer medium (e.g. paper listing, cassette tape, magnetic disc). All of these factors vary considerably from one program to another. Some schools might decide to develop their own program, but all the individual members of the project are that now will simply not have the time and expertise to do this. The substantial software development needed by secondary education will not spontaneously follow from schools purchasing microcomputers. It will have to be produced by concerted, well-organized effort of the kind found in major projects around the country. Education cannot rely solely upon a national "Dad's Army" of uncoordinated part-time voluntary efforts from teachers to provide the software that our schools require.

When selecting a microcomputer a good many factors need to be considered: the capability, reliability and integrity of the equipment, its supplier, accompanying software and literature. The complexity and diversity of the market make decision difficult.

This problem would be greatly simplified if most schools, for their own sakes, were obliged to recognize and conform to their L.E.A. recommendations and policy which, in turn, would have regard to the national pattern of development. This prescriptive approach is the only way of sustaining real progress and avoiding the alternative scenario of chaos and disillusionment that could result from a wide variety of microcomputer makes, models and configurations. When dealing with different micro-



computers, project workers experienced difficulties in transferring programs between schools. Schools computing is going to be all about "sharing" on both a local and a national scale. The Project Report recommends that the authority should adopt as its standard a disc-based RML 3802 with 32K of memory and a printer.

Apart from equipment and software, the successful exploitation of microcomputers. For schools hoping to make full use of microcomputers, technological problems are overshadowed by human problems. It is important that the entire teaching force should be made aware of what is possible and available to help particular subject areas, and, on a lesser scale, it is important to inject into our schools many more teachers with specific experience and expertise in the use of computers.

Durham has for a long time staged in-service courses and conferences in this subject, and intends to intensify this activity. The New

College Faculty of Education will play a central role in these developments. Substantial Computer Education options have been built into the Initial BEd Honours year and into the In-service BEd (Hons). Furthermore, it is intended to offer a diploma course in Computer Education and to stage, in consultation with the Authority, a series of curriculum software awareness courses.

Even in a period of financial stringency Durham is investing £50,000 in a three-year programme to help equip its schools with recommended microcomputer configurations. A development plan for Phase Two of Durham Microcomputer Project has been formulated, in which the existing activities in the county will be continued and expanded. Under this plan, work in curriculum development, software development, initial and in-service training will be integrated. Details of the plan have been submitted to the Department of Education and Science for consideration.

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The greatest challenge

BILL TAGG argues that the key to success is software

In 1973, Hertfordshire set up an advisory unit for computer based education and it is the entrepreneurial activities of this organization which have put Hertfordshire in the forefront of computer education today. The key to their success has been software not hardware. Hardware costs have plummeted: (if the same level had occurred in the motor industry during the last 15 years, it would be possible to buy a family saloon car for only a few pence today) so that software now becomes the major investment.

What is software?

Educational technologists have used the term software for years in much the same way as the word films, videotape, slides, overhead transparencies as opposed to the equipment used to display these, and in computing parlance the term has a similar meaning. However, computer software is historical and it will be useful here to distinguish three different levels. First, and most fundamental is the operating system of the computer. This almost always originates from the computer manufacturer and through it the user is given an overall method of communication with the computer.

This level of software is usually general purpose so that for a micro-

computer the same operating system would be used by the small shopkeeper, the home computer enthusiast, the school child or the headmaster (with his computerized school roll). Because it is common to all users, the cost of its development can be shared so that for any one user it is cheap. However, it must be well designed if it is able to communicate with a variety of users which is why manufacturers often describe their operating systems as "friendly".

The next level is the programming language software which again is often supplied by the manufacturer. A programming language, like its natural language counterpart, enables the user to communicate with the computer in detail but about a variety of problems. However, you have to be a sort of expert to be able to express your problem in a form which complies with the syntax rules of any programming language, although some languages (the so called high level languages) meet the user half way.

It happens that some children learn to write their own programs with great skill and enthusiasm and many computing courses include a section on program writing. No one suggests that children should be turned into professional programmers but learning to write a program is one way of discovering the power and generality of a computer.

The software needed to translate programs written in these languages is again reasonably cheap because its general purpose nature means

that the effort of developing it can be shared. Furthermore, as the hardware falls in price, the size of the market increases so this section of the software also becomes cheaper.

The final level of software comprises all those programs written to do specific jobs. These applications programs form the large foliage compared to the single trunk of the operating systems software and the branches corresponding to the programming languages. This level of software is extremely diverse but it is through it that the computer becomes a powerful teaching aid.

Applications software is very expensive because the market for any particular piece of it is small. Schools, like other groups of computer users, have been trying to cooperate so that these development costs can be shared. Unlike other groups of users, however, they have been singularly unsuccessful.

Industry and commerce have accepted the need for software exchange and put it on a formal footing. They buy and sell it at realistic prices and software houses (companies which write software) have no difficulty in staying in business.

In Hertfordshire we have tried to share the load of software development by establishing a library of applications programs and by backing this up with a proper cataloguing service, teachers' notes and teacher training. The programs and associated documentation are called packages and fairly obviously they come in different sizes. The diagram shown here applies very roughly to one of our smaller home-grown packages.

The figures shown are man (or woman) hours of effort. It seems to confirm the point made by educational technologists: that an hour of student time requires 200 hours of preparation. Although we have quoted three hours of student time, not all of this would entail use of the computer.

In Hertfordshire there are over 80 such packages, nearly half of which are home-grown. Those which we have obtained from elsewhere have mainly come from the Curriculum Council computers in the Curriculum project but many of our own we have attempted (but usually failed) to make available elsewhere. A quick calculation shows a total of seven man-years of effort and even when we note that a large proportion of this time comes from out-of-school, teacher time, it is still a sizable

Foundation and based at the University of Illinois.

This was typical in that it is a large system providing large numbers of terminals to many schools, colleges and universities. In America today, PLATO terminals, offering sophisticated display and entry methods, are used for remedial learning and simulations in schools as well as support for courses in higher education and industrial training. The system is now marketed on a commercial basis by Control Data Limited and several other countries, including the United Kingdom.

Terminals linked to medium or large computers have been in evidence in a number of States or school districts throughout the 1970s. One of the best examples in Minnesota where the Minnesota Educational Computing Consortium (MECC) provides computing services and teacher training through the state. Funded by public educational systems, MECC facilities include two large computers serving about 2,000 terminals and dedicated separately to administration and instructional computing. Recently MECC has also acted as a support and distribution agency for microcomputers, with over 1,000 systems bought on behalf of schools and colleges.

These microcomputers are also acting as remote terminals to the MECC computers—a practice which is seen in a number of United Kingdom authorities. The MECC system of organization represents a good model which could be appropriate

for larger British authorities or groups of authorities.

Although there is much which is impressive in the United States there is still no coherent pattern and large areas are relatively inactive. It is only recently, for example, that any widespread teaching about computers, the fashionable phrase now is "computer literacy" and the perception of the need for a general awareness of computers follow very closely the thinking in Britain a decade ago. This is necessarily a very sketchy picture of schools' computing, wide with significant omissions. Ontario, Canada, for example, showed early interest in the teaching of data processing and computer block countries, particularly Hungary, would appear to be developing a strong pedagogical foundation.

For a week in April, in Paris, the International Federation for Information Processing (IFIP) held a working conference on "Microcomputers in Secondary Education". It was apparent during that conference that the British experience of schools' computing stands up well. Teachers have thought through curriculum implications and have made effective use of frequently limited resources. There are, however, serious gaps in the effective use of computers in schools and of the curriculum implications of microelectronics. It is to be hoped that the DES initiative will help teachers and educators to overcome these.



commitment on the part of one L.E.A. There are many things which we are failing to do but amongst our successes are:

● We have established a standard for microcomputer hardware. This makes software distribution a possibility because we do not have compatibility problems between machines.

● We have established a network which enables all the microcomputers in the county to link into a central computer run for the schools by the computer centre at Hatfield Polytechnic, so that copies of the library software can be transferred over the telephone system into the microcomputers, to be run locally and if necessary stored locally.

● We have established software standards which make it easier for teachers and students to use a second or subsequent package once they have learnt to use the first. The software standards also enable our program writers to be more productive for it has been possible to provide a series of commonly required software tools which our program writers can build into their programs instead of having to rewrite them each time.

● We have been engaged on four major exercises not mentioned above. Each one has involved thousands of pupils and each has been in operation for at least eight years.

● We have established a structure which enables a continuing debate to take place between head teachers, county officials, advisers and teachers' centre leaders, teachers, and parents. In this way we have identified many more aspects of the new technology which we need to introduce into our schools because of their poten-

tial impact on society or because of their potential impact on the teaching and learning process. Swimming or drowning with the tide.

The growing wave of enthusiasm means, unfortunately, that each month we do things less well. We only are our efforts to be shared amongst more teachers, but a greater proportion of the teachers we interact with are new to computing so that we have to wait longer before we can begin to put their enthusiasm to use by sharing resources for use by others.

We are failing hopelessly to do with the enquiries from outside Hertfordshire and we see many opportunities. The recent government announcement to spend the next four years has our just in time. The Department of Education and Science has identified three key areas where it wants the money to be spent:

Curriculum development
Teacher training
Software development and distribution.

We certainly applaud this initiative and look forward to an impetus to computer based education, but we have been too long. Education, because of its grass roots autonomy, is capable of responding to this second industrial revolution in a way that other countries cannot do so. If we have good reliable software, teaching material to go with it, imaginative guidelines which exploit it and teachers who understand it, then this country will continue to maintain a strong lead in the areas that have always been its main strengths in the past—namely inventiveness and knowledge.

Dr W. Tagg is Director of the Advisory Unit for Computer Based Education in Hertfordshire.
● On page 52 John A. Coll discusses the transfer of software.

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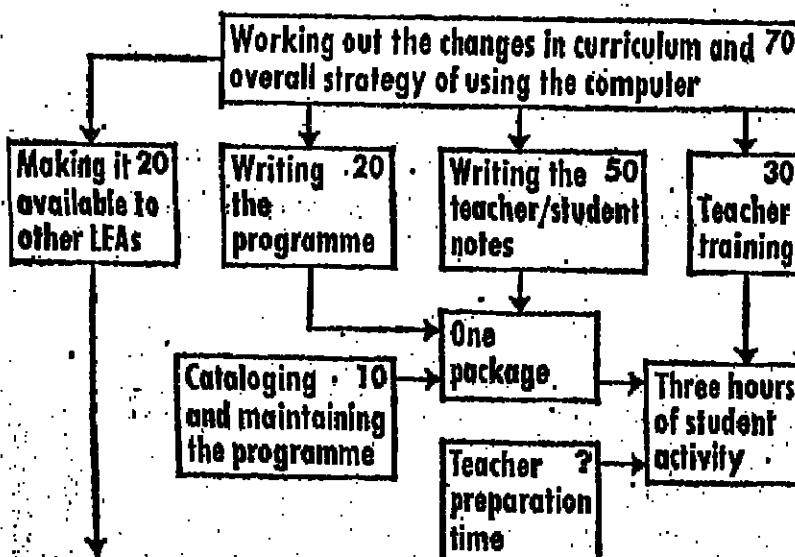
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Time required to produce a small software package.

Differences of style

JOHN TURNBULL on what other countries are doing

As the DES embarks on a four-year development programme for microelectronics in schools, it is interesting to look beyond the British educational scene to ways in which other countries are involved in educational computing.

The British tradition of computing in schools has emphasized a narrow computer technology and application. Early enthusiasm came from teachers of mathematics and, as a result, programming has formed a major part of syllabuses. This tradition is evident in Europe, notably in Scandinavia and in West Germany. More recently computer studies have been accepted in Ireland as a subject which may be included in the curriculum, after a seven-year effort by isolated teachers through the Computer Education Society of Ireland.

In contrast, the emphasis in France has been on the use of computers in the classroom rather than on the teaching of computing. The centralized education system militates against fragmented entrepreneurial activity but there was

early recognition by central government of the importance of schools computing. In 1970 the French began to put multi-terminal systems into schools and by 1975, 58 systems had been installed. Common systems and a common computing language, LSE, and a common teacher training and ensured the easy transfer of computer programs between schools.

With the advent of microcomputers the French are now placing these small machines, rather than terminals, in schools. The aim is to provide all high schools with microcomputers within four years' time, following the experience of the terminal based system. It is hoped that most schools will have several machines.

The French are standardizing on two locally produced computers. The arguments in favour of this are sound, not only in national economic terms, but also in educational terms since, in theory, the supplier can respond to feedback from schools and produce equipment which meets the teacher's needs. The United Kingdom approach of "buying what you will" is commendable in many ways but a number of people feel that the time has come to look at what the United Kingdom industry has to offer in order to determine whether we too could benefit from a greater degree of standardization.

It is inevitable that comparison is made between the British and French approaches. In France the emphasis has been on resources—at least as far as funding is concerned—whereas here the DES has

specified teacher training, curriculum development and software development as the priorities. Since the system is dependent upon the prevailing educational work it would be useless to argue which is better. However, within these frameworks there is a variety of approaches which are worth sharing, and it is to be hoped that a continuing dialogue will be maintained between educators in the two countries.

Looking beyond Europe, schools computing, generally, is patchy. There has been, for example, a schools' computing centre in South Australia for some years and other Australian states too are active, with an emphasis on computer programming. Possibly the best supported and coordinated activity is in Tennessee where the relatively small school population is supported by a well-staffed computer centre equipped with powerful Digital Equipment computers.

The most ambitious projects in schools computing are in the United States. Unlike the United Kingdom, emphasis in America has been on applications. The computer was first used by the administrators in schools and school districts and it is now common for quite large computers to be used for records, scheduling and finance, often independently of any classroom activity.

By the mid-sixties it was recognized that the computer could provide individualized learning and a number of major projects were initiated. One of the best known of these was the PLATO project, funded by the National Science

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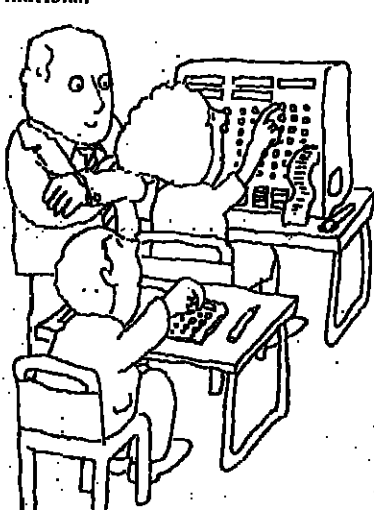
SARAH SEGRUE looks at the attitude of the examining boards to calculators

Log tables and slide rules have long been accepted by examining boards in public examinations but opinion is divided over the use of pocket calculators.

This comparative newcomer to the list of allowable candidate's aids is continually under scrutiny by the General Certificate of Education and Certificate of Secondary Education examining bodies, and the situation alters annually.

Candidates who use calculators are at an unfair advantage, the cost is prohibitive to some pupils, an examination should test the understanding of the subject, a pupil should be able to show the working involved in reaching an answer. These are some of the arguments the examining bodies have considered in reaching a decision on the use or non-use of the calculator.

The only element of uniformity is that all eight GCE boards permit the use of calculators, but with restrictions in the subjects in which they may be used. From that point the boards differ. For example, the Welsh Joint Education Committee only permit the use of calculators in A level physics and chemistry and not at all in the O level examinations.



In contrast the Associated Examining Board allow calculators in the majority of O and A level examinations, excluding them only from any objective multiple choice test and papers which are designed to test the candidate's ability to calculate such as O level mathematics and statistics and A level accounting.

But it is not just the subject matter that is under discussion when boards give the go-ahead for calculators. Consideration has to be given to the type of calculator candidates can use. Again there is a variance between boards and at times within the same board.

Southern Universities' Joint Board for School Examinations differ between exams in which calculators may be used, like A level physics and chemistry, and those exams where the calculator has to be a non-programmable type, without built-in statistical programmes, as in A level mathematics. The problem with the latter type, as several boards including Southern have discovered, is that not all invigilators can distinguish a programmable calculator from a non-programmable calculator.

Where there is agreement between the boards is the calculator should be silent, cordless, and the responsibility of the candidate. An calculator becomes more compact and capable of tackling more problems and formulae, specific mention is being made in regulations governing their use to the effect that instruction booklets may not be taken into the examination room. Such a change has occurred in the regulations for Oxford Local Examinations, from 1981.

Calculators were acknowledged by the GCE boards in the latter half of the seventies. But for the Joint Matriculation Board it is 11 years

since calculators were first allowed. The subject which started their use, almost unnoticed in 1969, was mathematics advanced syllabus B. Unnoticed because it was not until 1976 that the main announcement came from JMB that calculators would be used in most examinations with effect from 1979.

All boards try to ensure that candidates without calculators are not at an unfair disadvantage. Calculations may be those that can be done with or without a mechanical aid, or the question may be phrased in such a way that calculators cannot be used. Or there may be alternative papers as in the Schools Mathematics Project, organized by the Oxford and Cambridge Schools Examination Board. Last summer 11,000 candidates were only just agreed to participate in a paper designed specifically for those who work with calculators and this year the number entering that paper had risen to 15,000.

While the GCE boards have accepted in practice the use of calculators many of the CSE boards have only just agreed to participate, making the eighties the era of the calculator for CSE pupils. One area, the Welsh Joint Education Committee, however, introduced calculators in a sub-section of mathematics and then withdrew their use in 1978 because they were so unpopular.

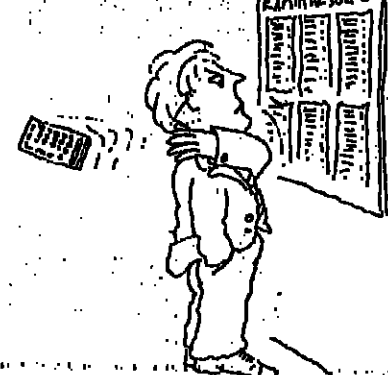
The West Midlands Examination Board was one of those which was completely against the use of any calculators on the grounds that to allow any use was socially divisive. But opinions changed and calculators have become cheaper and more widely available so from 1982 West Midlands will allow their use in maths paper 2.

Many of the CSE boards have adopted the attitude of the South Western Examinations Board which is that subject panels must authorize the use of calculators in examinations once satisfied that one is available to all candidates. This in effect has led to them being allowed in Mode 3 exams, the only ones which individual schools draw up, and in some Mode 2 but not at all in Mode 1 exams.

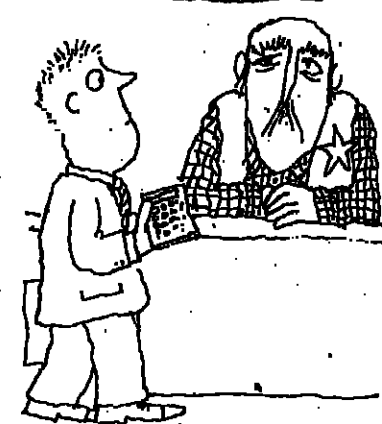
Some boards, like West Yorkshire and Lindsey, positively encourage the use of calculators especially in Mode 3 exams where the individual school syllabus lies with the individual school. The only restrictions are if the examination aims to assess ability in computation skills and ensuring that similar facilities are available to all candidates.

Always aware of the criticisms about the use of calculators, the subject panels of the CSE boards keep the matter constantly under review and some are waiting for the publication of a Schools Council report on the subject. From the exam point of view some boards have already done their own review. For the East Anglian Board the result was inconclusive.

The trend appears to be for a greater use of calculators in the future. But whether there will be any drastic changes remains to be seen. Certainly the GCE and CSE boards are cautiously widening the subjects in which they are allowed. But will they, for example, respond to the "back to basics" pressure and slow down the introduction of



CHECK IN YOUR CALCULATORS



calculators, especially in some of the mathematics papers?

What has to be remembered is any change takes at least two years to implement. Boards are considering syllabuses for 1983 and beyond but the situation is still confused so greater uniformity among the boards is still to come.

The use of calculators varies as this brief survey of the existing situation shows. First the eight GCE boards:

Associated Examining Board: Used in the majority of A and O levels. Certain restrictions such as objective multiple choice tests, Accounting, O Mathematics, additional Mathematics, Accounting, statistics.

University of Cambridge Local Examinations: Used in majority of A and O levels. Restrictions in some Mathematics questions, Business Studies, papers 1 and 2, General Studies paper 4, 16 plus Mathematics, paper 1, certificate in Arithmetic.

Joint Matriculation Board: Allowed in subjects where calculations done. Restriction on one Commercial Mathematics paper. University Entrance and School Examinations Council, University of London: Used in all appropriate examinations other than O Principles of Accounts, Navigation and Seamanship, A Economics paper 3, Sociology, and certain Mathematics questions at O level.

Oxford and Cambridge Schools Examination Board: Restrictions only in board's O Mathematics, School Mathematics Project, Mathematics for Education and Industry, St Dunstan's. Oxford Local Examinations: Allowed in 15 A levels; two Alternative O levels and one O level. The only Mathematics paper included is Physics and Mathematics at A level.

Southern Universities' Joint Board: Allowed in A Physics, Chemistry, Mathematics, O Statistics. Not allowed in O level Mathematics. Welsh Joint Education Committee: Allowed in A Physics, Chemistry. Not allowed in any O levels.

Certificate of Secondary Education Boards South Western: Allowed where subject panels authorize calculator use. Available to all candidates taking the examination. South-East Regional: Not allowed at present. Policy changing in 1982. Southern Regional: Not allowed except for Statistics and some Mode 3 examinations.

London Regional: Combination of Middlesex Board which did allow the use of calculators in certain examinations and the Metropolitan Board which did not permit their use. East Anglian: Allow their use other than in specific papers like Mathematics.

West Midlands: Seen as "socially divisive" so not allowed. Policy changing in 1982. East Midlands: One paper specifically for calculators introduced this year.

North West: Used for the first time this year in Physics and some of the Traditional Mathematics and Modern Mathematics papers. Associated Lancashire: Allowed in one of the Mathematics papers and certain science papers—General Science, Physics, Chemistry, Biology.

West Yorkshire and Lindsey: Not allowed in Mode 1, allowed in certain Mode 2 and Mode 3 examinations. Yorkshire: Only in Mode 3 examinations if all pupils have them. North Regional: Allowed in all examinations except Mathematics. Welsh Joint Education Committee: Not used.

Into other regions of the curriculum

BOB LEWIS on the Schools Council Computers in the Curriculum project

The first of the Schools Council Computers in the Curriculum materials were published recently, ten years after the beginning of the Chelsea Science Simulation Project.

The materials were designed to be integrated into existing sixth form and pre-sixth form curricula. Some of the sixth form materials can be used in colleges, others try to tackle some of the numeracy of lower ability pupils. At all levels, the aim has been to provide students with new opportunities for learning through investigations guided by their teachers. There is no need for either student or teacher to be familiar with computing, and the units are not designed to teach this.

Chelsea Science Simulation Project materials are available as class sets, with six copies of the students' notes and one teachers' guide for each of the ten topics. The Computers in the Curriculum publications are in the form of loose-leaf packs for biology, chemistry, physics, economics and geography. They contain (in 150 to 190 pages) notes for the teacher on the topic, and material for students in one of two forms.

The short form comprises students' leaflets for use with lessons or laboratory work. The long form has been used for topics best covered by a small booklet. Teachers may reproduce the student pages.

The associated computer programs (in the BASIC language) are available free to purchasers of the packs on paper tape or as listings. A small charge for the magnetic material is made for cassettes or disk for some microcomputers. All the programs are available for the Research Machines 380Z, and it is hoped that APPLE, PET and NewBrain materials will be available before the summer.

The materials for both projects were written in an age of relatively large computers, to which a few schools gained access by moving students by telephone connections. Live interaction between student and computer was likely to be through a noisy, electromechanical teletypewriter. The consequences of this environment for the design of educational materials can now be seen.

Slow interaction put limits on the output from the computer program. Verbal prompts to students had to be brief, as did the presentation of outcomes (results). The quality of the output was also poor, which limited the range of presentations to simple sketch graphs. Generally, no more than two or three students at a time could see what was being printed. The need for a telephone connection also meant that the program could not be used easily in any classroom, and in any case moving the terminal about was laborious and likely to cause damage.

Even if a television type display were being used, the unreliability of the access to the remote computer made scheduled, whole-class use problematic. So materials were primarily designed for use by small groups of students working on their own or as part of a range of classroom or laboratory activities.

Teachers writing the projects learnt to accommodate these limitations and still exploit the facilities, gaining invaluable experience. Microcomputers are not going to solve all the problems, particularly those fundamental to the difficulties of learning. Text, for example, can now be presented speedily on a microcomputer screen, but students are likely to become quickly bored with verbal instructions. Some will also find reading difficult. The television screen holds very little text in the short-hand form of dialogue used in earlier materials, and is usually still needed, as are carefully designed printed materials.

While some features of CAL design will remain, there will be important changes. Two particular qualities of microcomputers which will be generally available are clear television screen display which can be linked to CCTV

monitors, and sometimes, graphical and diagrammatic display of good resolution. Lower costs, increased reliability, independence of telephone link and greater portability are other special advantages.

These features open up a new dimension in the use of computers in schools: the "electronic blackboard". With well designed computer programs teachers can have a resource for presenting a wide variety of instantly adaptable diagrams. The use of a graphics tablet for preparing diagrams or pointing to part of a display is also important. The colour graphics capability of the Research Machines 380Z system was well illustrated by four CAL programs at the Challenge of the Chip exhibition at the Science Museum.

Lecturers on the work of the Computers in the Curriculum Project are being given, also at the Science Museum. The next one will be on October 30. CAL materials being developed by the Computers in the Curriculum Project will take such facilities into account and will also introduce materials especially con-

ceived for classroom tutorial use. Existing materials can be used in this way, and many teachers report that they are effective. Many teachers will probably wish to adapt the present programs to their own facilities. This is to be welcomed as long as there is an educational improvement in the end product.

The Project always intended to leave many of the decisions on the use of the material to the teachers. The new materials will attempt to be even more flexible by providing the options for use in classroom tutorial, individual remedial work and small group learning. Student material or teaching suggestions will cover all these options. As teachers feel more at ease with microcomputers, the materials will be used more as elementary resources than specialized teaching units.

As with the earlier work, the Project has to find a compromise on jumping facilities. Bearing in mind the inevitable delay in publishing, there is a pressure to make use of the most advanced facilities on microcomputer systems in designing its CAL material. However,

whenever the material is published it will have the potential for impact on the largest number of students if its demands on facilities are minimized.

Advances should be seen both in terms of extended features and facilities in schools. The NewBrain system from Newbury Laboratories is an important breakthrough: a fully developed and enhanceable system with a basic price of £200.

It is also rather early to judge the educational importance of computer output on paper. For some topics this may be essential. Devices for printing a simple character output are quite inexpensive, for good graphical output they are likely to remain fairly expensive. Another complication is the range and the need for the Project's programs to be widely usable. A complete input/output library of programme routines has been prepared, upon all the Project's new programmes will be based. The library and the standards towards which the Project is aiming are dis-

cussed in Project Paper 15, available from the project. The recently published CET Guide to the Selection of Microcomputers (USPEC 32), available from the Council for Educational Technology, 3 Devonshire Street, London W1N 2BA, discusses the characteristics of microcomputer systems for educational activities.

There has always been a danger that the excitement of computer technology will lead to the computer-looking-for-a-job syndrome, a danger worsened by the micro-electronic revolution and the prospect of £5m from the government. The educational future for children can be improved by intelligent use of the technology, but learning difficulties will not be solved by technology alone. The greatest challenge is the educational one. We need help from the best teachers to design curriculum materials and methods which will make use of the opportunities the technology offers.

Bob Lewis is Director of the Computers in the Curriculum project.

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extra

Back to paper

A. K. HENNESSY, ROBIN LLOYD-JONES and PHIL KINGSLAND survey printers

When the teacher starts to use the school's newly-acquired micro-computer, he soon realises that he needs some method of permanently recording the information displayed on the video screen. In the trade, this is called "hard copy" which is provided by a printer. When the teacher starts looking, he finds a bewildering array of devices to choose from. What the teacher needs is a reliable printer with enough features to meet the requirements of his school's computing activities (such as assessed computing work) within the limits of the funds available. Sifting through the catalogues and brochures, what should the

teacher look for? What do the technical terms mean, translated into performance and features? What is the cost of a reasonably adequate printer?

Printing Techniques

"Hard copy" can be acquired in a variety of ways. Almost everyone is familiar with the typewriter method: there is a type bar for every two characters (for example, A and a or 5 and 5), one character being the upper shift. As the type bar hits a piece of paper with an inked ribbon in between, the character is printed on the paper; a spacing mechanism moves the carriage on from right to left and a carriage return mechanism is operated to move the carriage back

to the left margin and advance the paper.

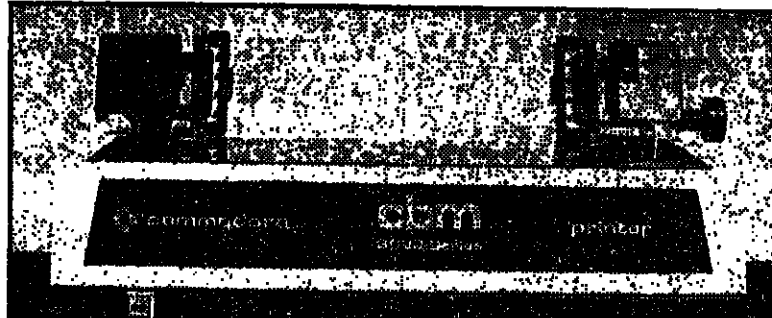
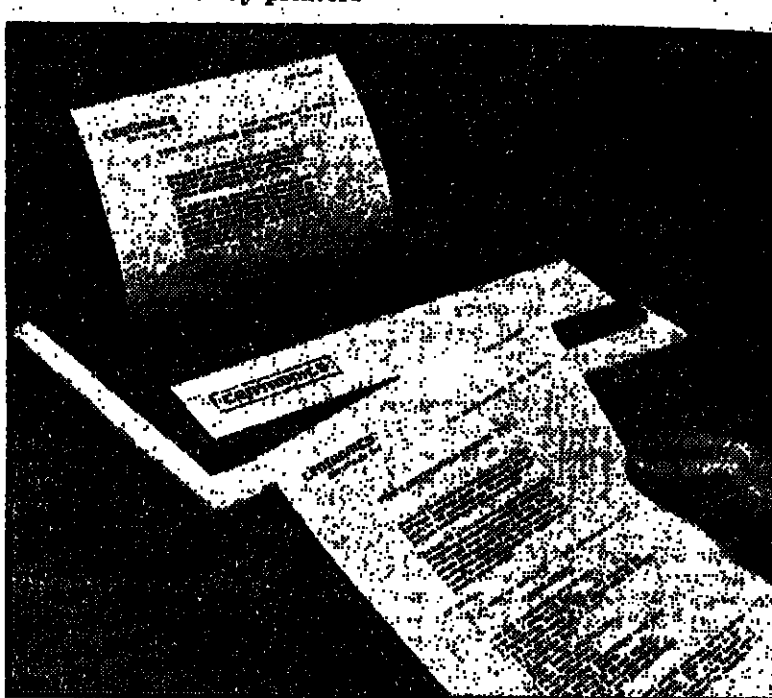
This type of printer could often be found as the console printer for second and third generation computers; a few schools have managed to obtain one free when an old computer is scrapped. It is not suitable, however, for the fourth-generation microcomputers, because it is too slow (usually no more than 10 characters per second) and the type bars can become jammed together; in addition, the carriage return involves moving the entire paper-holding mechanism, which is heavy and is easily jammed.

Using the same idea, but with the characters on a print mechanism which moves (either line by line or character by character) more quickly at about 30 characters per second, with less risk of jamming and other mechanical failure. There are two types: the "teletype", which has a cylindrical type head, and the "golfball" with a spherical typehead. The "teletype" is very commonly found in schools as a computer terminal linked to external computing services; the "golfball" is sometimes obtained as a console from a scrapped obsolete computer system. When low-cost printers were very scarce two years ago, some electronics firms adapted "golfball" typewriters to print from microcomputers. This type of printer cannot usually operate at more than 30 characters per second and costs £600 to £1,000. In today's printer market it is not a good buy, as its mechanical operation can be unreliable and maintenance costs will soon outstrip the savings made in obtaining a used or gift machine.

By far the most popular printing method at the moment is the dot matrix technique, which forms characters by a column of protruding pins in a matrix print mechanism. The pins are 5, 7, 9 or 13 characters across the paper, printing character by character as it goes. Some printers also print while returning the print mechanism from the right to the left margin, which can increase the printer's speed by 50 to 70 per cent. The dot matrix method is used to form characters in several ways: by heating the pins, and pressing them against heat-sensitive paper (thermal printing), by charging the pins electrically, and making them discharge on to electrically sensitive paper (usually only available on narrow paper such as ticket printer), or, most common, by pressing the pins against an inked ribbon on to plain paper.

The dot matrix printers vary in speed from 30 to 500 characters a second, and the prices range from £200 to £2,000. Some are extremely reliable, while others, designed for the hobby market, are only suitable for short periods of printing. A variation of the dot matrix method is the "comb" technique in which there is a needle for every column of dots and there is no moving print mechanism; it is extremely fast, and costs about £1,500. A spinning wheel with type faces at the ends of the spokes is another approach to putting characters on paper; it is called the "daisy wheel", and operates at about 40 characters a second. The print quality is very good, and most daisy wheel printers can produce circles and curves as well as graphs. It is possible, as with "golfball" printers, to change the typefaces very easily. Prices begin at around £1,500 to £2,000.

Three techniques which are now considerably up-market for schools but which might be within reach in a few years are: the ink-jet method, in which the image is sprayed on to the paper at about 10,000 lines per minute and prices starting at £3,000; the electrostatic (xerographic) printer which produces full page images on an electrically charged plate and transfers the images to paper by means of a black powder baked into the paper (this has similar speeds and costs to the same as the ink-jet method); and the laser printer, which burns full-page images on to paper at speeds exceeding 50,000 lines per minute with prices starting at £10,000.



Above: the Centronics 730 and below: the Commodore 3022.

Features To Look For

A practical speed for a school printer is 50 characters per second; any printer slower than this is likely to cause queues. With the problem of keying in pupils' work still unsolved, it is not advisable to choose a printer that might cause another bottleneck. Speed figures quoted by manufacturers can be misleading; some printers, such as the Teletype ASR43, move the print mechanism only as far as the last character in the line. Others operate by moving the print head over the entire width of the line regardless of the number of characters in the line. Obviously, the printer that skips to the next line as soon as it has printed all the characters in a line is going to work much faster in real terms than the one that operates in time printing blanks. Printer speeds are sometimes expressed in bauds, which is roughly 10 times the character speed; thus 300 baud is about 30 characters per second.

It is unlikely that a school computer would need a printer that operates faster than 200 cps. The method of handling paper can affect printer costs and performance. Some printers move the paper forward by gripping the paper between two sets of rubber rollers (friction feed), much as paper is handled on a typewriter. They can take teletype rolls, which contain 200 to 400 feet of paper, costing 50p to £1. Some printers pull the paper forward by means of sprockets that fit into holes on the sides of the paper, registration of paper and alignment are the advantages of this method. This is called traction feed, and the paper with sprocket holes costs about £6 to £8 per 1,000 feet or 1,000 feet. For schools just starting computing with a very tight budget, using a printer with friction feed can save some money for buying other things such as program tapes. As a general guide to paper consumption, the average pupil taking CSE or O level computer studies will use between 100 and 200 feet of paper a year. A class of 30 would cost almost £50 with a traction-feed printer, whereas with a friction-feed printer it is possible to use the backs of old handouts or any other paper, as long as the printing method is

plain-paper and not thermal or electro-sensitive. Some printers are supplied with both friction and traction feed; some feature both forward and backward feeding, which allows for the printing of subscripted numbers and symbols above the line.

Connection to the microcomputer, or interface, is vital. Any microcomputer printer should be delivered with an interface, all ready for connection to the microcomputer. Any other arrangement is not acceptable for schools computing, as it could involve the school in extra expense or the risk of dangerous electrical connections. The interface should be a recognised standard one. There are two that are widely available: the RS232 serial interface that takes the information from the microcomputer one binary signal or "bit" at a time. This means that it takes an eleven signals eight characters. Another type of interface, the parallel interface, sends eight signals or one character at a time. The interface should operate with "handshaking" or "ready" signals; this means that both the printer and the microcomputer need to tell each other when they are ready to send and receive messages, to avoid loss of data if the printer is not ready to accept it.

The Commodore PET works in a slightly different way, with the special IEEE-488 parallel interface built in. Its printer is connected by a special IEEE cable without an interface unit. Interfaces cost between £50 and £300 depending on their functions and who manufactures them. Some interfaces tend to cause problems for the printing of some characters, and some interfaces with the tabular functions of some microcomputers. Most require their own power supply which means two more electrical socket outlets when the printer is installed. If a parallel interface is used, it normally cannot be operated with more than about 20 feet of wire between the microcomputer and the printer. When a noisy printer is kept in an adjoining room, the teacher has to be careful not to exceed this limit or some of the signal will be lost or distorted.

A word about the price of interfaces: some firms have developed

Continued on pages 49 and 50

Continued from previous page

very good units that are mass-produced at a reasonable price, while denser interface units are sometimes built in small workshops and are not really possible to sell from the price any thing about the features or quality. Some interfaces cause loss of the shift character, thereby preventing use of the printer's lower-case and graphics characters.

A reasonable printer for schools computing should have a buffer, or mail storage area, for incoming characters. The buffer should be able to hold at least a full line (many printers now have buffer capacities of 2,000 characters). This feature reduces the risk of losing characters sent by the microcomputer while the printer is busy dealing with other tasks such as returning the carriage and moving the paper. The buffer allows the printer to be run to different speeds, with different line speeds; the slower the printer, the more sophisticated printer, the buffered printer will be easier to sell or trade in. In general, the bigger the buffer, the faster the printer. It can also reduce the amount of time that the microcomputer spends "talking" to the printer, as the microcomputer can send a block of characters to the printer and then, while the printer is churning out the results, the microcomputer can carry on with the next processing task.

The printer should produce at least 80 characters on a line; this is normally 10 characters an inch on an 8-inch line. Some printers have a wider platen of 12 or 14 inches, in which case they can print 120 or more characters an inch. Many printers have a "squeezing" facility that allows them to print at 12 up to 40 characters an inch; this is particularly useful when lower-case letters and graphics are used. An interesting feature is the enhanced character function, whereby a character is spread over the space normally occupied by two characters; this is useful for headings and forms.

Many matrix printers have a special programmable character set which can copy one or more character positions, a feature which is particularly helpful with most American printers, which do not have a £ symbol; it can be created by programming the special character. The character set on the printer must include all those required for standard BASIC: A-Z, 0-9, +, -, *, /, %, ^, &, !, ? and any other characters that are used by the school's microcomputer, usually % and @. These days most printers include lower-case letters in their character sets; the better sets of lower-case letters are: what are known as "true descenders", that is, the lower parts of letters such as the y, g and p descend below the line.

As pupils and teachers become more familiar with computing techniques, the printer should produce curves, graphs and other images. One method is to provide graphics symbols within the printer's character set, such as those available on the Commodore PET printer. These are limited in that it is only possible to put one character in a dot or some other symbol—in a character position. Some printers provide high resolution" graphics whereby the pattern of dots can be put into one character position, making the printing of curves and shaded images possible.

Noise is a problem with printers that are used in the classroom; many are too noisy to be run while the teacher is talking to the class, and should not be placed near pupils for the same reason. Because the 100-plus decibels they produce can lead to hearing damage. Usually, the faster a printer goes, the more noise it makes; an exception is the dot-matrix printer, which usually does not exceed 60 decibels. To reduce the noise the teacher can stick some automotive "glances" under the lower surface of the top of the printer housing (this usually means screwing up the printer with a screwdriver, and should be done by someone who knows how to do this without blowing the circuitry); put the printer on standard type writer cushion (the thick felt type); fit the woodwork department to make a soundproof cabinet or housing; but make sure it is adequately ventilated. For the Commodore PET Model 2023, noise can be reduced by removing the wing nuts on the bottom of the printer.

Some printers have fabric ribbons, like those found on many typewriters, that move back and forth until the print image is too light and the teacher has to put in a new ribbon. Others have plastic ribbons that come in cassettes and cannot be re-used; they make very sharp images but they cost a lot to run. Another problem is the colour of the ribbons supplied; if pupils' work is being submitted for both CSE and O level assessment, it usually has to be photocopied, and if the ribbon on the printer is blue or there is not enough carbon in the black-coloured ribbon the resulting copies can be too faint.

One useful feature of some printers is a keyboard; this can sometimes be cleverly used to provide a second keyboard for input to the computer. A word of caution: this usually means several man-weeks of programming at machine code level, and is not for the beginner.

Safety is important when any piece of electrical equipment is used with school children. Most printers have reasonably secure housings, but some are not so safe. The Commodore 2023 tractor printer, for example, has a black plastic cover panel which is not fastened to the housing and can easily be removed, exposing the working parts which could trap fingers or hair. The biggest problem is that when the black plastic panel is in place, it is not possible to see the line which has just been printed—making the temptation to remove the panel almost irresistible.

Some printers, especially the cheaper ones, are very sensitive to electricity fluctuations. The PR-40

Continued on next page

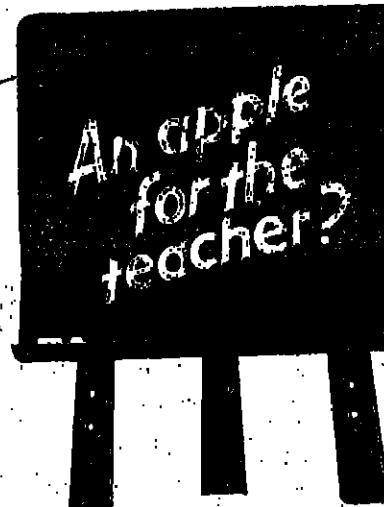
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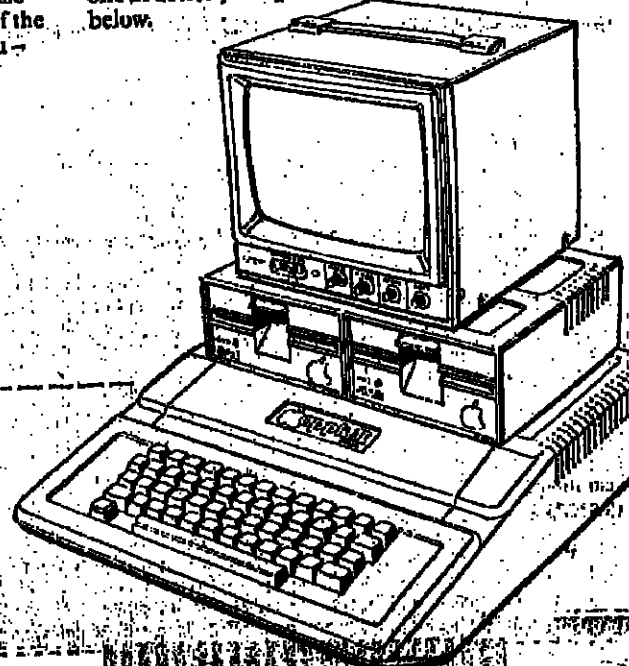
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extra Chips on show

PAUL MCGEE reviews "Challenge of the Chip"

The exhibition, *Challenge of the Chip*, is now on at the Science Museum in London. Accompanying it is a booklet *Check up on the Chip* which asks as its last question just what the challenge is. How well does the exhibition enable people (including parties of school children) to answer this question?

The exhibition consists of four main parts: development of microelectronic technology; a cinema showing six films; applications of microelectronics; and a display of the Department of Industry. The first two are typical Science Museum displays, the third is more like a Design Centre display, and the Department of Industry's contribution is a boring and unimaginative display about their Microprocessor Application Project.

In the microelectronic technology section there is a series of displays dealing with the nature of silicon and semiconductors, and the design and manufacture of chips. This can be quite tough going but is more easily digested if the booklet *The Challenge of the Chip* (11.25 Hb) has been read in advance. Some use is made of microcomputers such as the Pet and Apple to make some of the ideas easier to follow. The Pet is often used solely to display text although good use is made of its graphics capabilities to show how chips are mass produced. The Apple is well used to show the programming required to produce graphics. Some of the Apple graphics suffered, however, because the display televisions were not properly tuned.

Many of the displays in this section require dedicated hard work if their full value is to be gained. The significance of the display linking the telephone, television, and calculator is likely to remain obscure unless visitors have more information than is provided on the display stand.

Following the suggested route, the next major item is the cinema which shows six films lasting a total of 55 minutes. It is hard to see any casual visitor saying for that length of time and almost inevitable that any school would devote such a large part of a visit to watching films.

As a reward for surviving so far, children enter paradise and adults purgatory. The working computer toys are mounted in sturdy plastic cases, and set at child height. The labels give little or no information about how the devices are operated or what the rules of the games are. However, the children seem not to bother and the games are heavily used and generally stand up well to the treatment. This is an encouraging sign for those who believe that cheap electronic devices could find a useful place in the classroom.

There is then a more sedate look at applications with displays provided by industry and commerce. IBM has provided a manual display of their supermarket checkout system. The assistants are helpful and knowledgeable until asked details of the IBM equipment such as memory size, type of backing store and cost.

Passing by the dull exhibits of office equipment, one is confronted by ICL's model car complete with flashing lights and film to explain microprocessor applications in cars. This display will be of interest to the mechanically minded but is rather hard work for the layman. British Rail use their space to show how wonderful the railways of the future will be. Unfortunately, the exhibit is meaningless without the recorded commentary which can only be heard on four telephone handsets. School parties would therefore have difficulty making use of the display.



Schoolchildren at IBM's supermarket checkout system.

The Marconi stand, reputed to be very impressive, was not working. This was true of some other exhibits and the difficulty of maintaining a large exhibition with a limited staff. As there is so much to see no one would be too disappointed if a few exhibits are not working, but teachers should be wary of promising children a specific working display.

The section on microelectronics in education showed small devices such as language translators and the Little Professor, and two Research Machines, 380Zs, which are used to display a maths drill routine and a windmill locating exercise which makes impressive use of the high resolution colour graphics.

The medical section shows the EMI Scanner (another piece of British technology lost in America); MICKIE, which was developed at the National Physical Laboratory to

help patients to record their symptoms and ailments before seeing the doctor; and devices for helping the handicapped to communicate.

The section on process control covers data loggers, laser printers, colour graphics, an electronic balance shown weighing jumping beans, and includes a film. The section on the home covers briefly electronic sewing machines, cookers and washing machines.

This is a large and impressive exhibition which has been mounted at quite short notice. Unfortunately, it closes at the end of the year. What is needed is a permanent public exhibition to which displays could be added to take account of new developments. Such an exhibition would undoubtedly be expensive to mount and run but the Government has to decide how important it is to alert the whole population to the importance of

microelectronics. The needs of schools were not given a high priority in the planning of this present exhibition, but they could be better catered for in a more permanent exhibition.

My visit lasted about two hours and this included reading about half of the labels. No films were seen and no devices played with. Teachers will need to visit the exhibition in advance and carefully select what is appropriate for their particular class. The booklet *Check up on the Chip* (5p) and a class set of chips is provided by IIT. The worksheet is rather general and most teachers will probably want to use some of its ideas to help them produce their own. An information sheet is available by post from the education service at the Science Museum and this contains useful references and dates of some interesting lectures.

will—the "bargain" firm will have to arrange for the specialist firm to do the repairs, which can take weeks, and the "bargain" firm will add a hefty percentage on to the specialist firm's repair charges. Some education authorities direct schools to purchase microcomputer equipment from one or two "big gain" firms which can mean poor or nonexistent installation services, long delays for repairs and excessive costs for repairs and maintenance.

The biggest trap for the unwary teacher is the printer that has a lot of features, seems to do everything, looks good, and then falls apart when subjected to the punishing demands of school use. There is no way of telling whether the components are robust enough, whether the features will really work under a variety of conditions—except by consulting specialists who have put the equipment to a number of tests and know the problems other customers have experienced. One printer, for example, works very well—until it is run without paper and the print head is damaged; this can easily happen in a classroom when the teacher's attention is diverted. Another trap is the printer that is very inexpensive but needs paper that is only available from one supplier and costs four or five times as much as plain paper. The teacher will also get a nasty surprise if he buys a printer on a "bargain" basis and then the manufacturer discontinues production of the model.

Steps the teacher should take to obtain a suitable printer for his school are:

- Find a competent, reliable microcomputer dealer.
- Look at a number of models; find out what other schools are using.
- Insist on having all features demonstrated on the school's microcomputer—not some other model.
- Ask for the names and addresses of other customers that have bought the printer and contact them; ask about the dealer as well as the equipment.
- Resist pressure from the education authority and salesman to buy from a dealer that does not appear to give adequate service.
- Arrange for maintenance service before ordering any equipment.

Buying from "bargain" dealers means that when the teacher has technical queries he is in turn to be helped and unlikely to get the benefit of expert equipment testing and evaluation that is done by the specialist firms. Another problem with "bargain" buying is that when something goes wrong with the equipment—and it inevitably

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Microcomputers in Education

Full Day Seminar, Thursday 24 July 1980

Many of those involved in Education are unaware of the impact that microcomputers are likely to make on not only the way they teach—but also on what they teach. The speakers at this seminar are all involved in the introduction of computer systems to schools and the inevitable problems that they bring.

This session gives the opportunity to hear experienced teachers and advisors saying and demonstrating what they feel to be important since it is only by experience that one really becomes aware of those methods and subjects which the computer can aid.

This full day seminar 'Micros in Education' is held in conjunction with the three-day 1980 Microcomputer Show at the Wembley Conference Centre, London 22-24 July 1980 which includes the most comprehensive exhibition of microcomputers ever held in this country.

There is also a two-day international conference and a full programme of one-day seminars to cater for the person in business as well as everyone within the computer industry.

Online Conferences Limited, Argyle House, Northwood Hills, Middlesex HA6 1TS. Tel: (09274) 28211. Telex: 923408.

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TE **online**

Timetabling

Continued from page 43

must be "sold" and successes, short cuts, improvements, etc. communicated immediately to all concerned.

Every department must be involved and their full cooperation is essential.

Paperwork can proliferate. It must be carefully watched to ensure it is kept simple and duplication of returns is avoided.

New forms need to be carefully thought out and explained to all users.

A link to the computer is vital, otherwise the delays in transporting data result in the read-outs being out-of-date. A VDU is a considerable asset.

A natural resistance to new schemes and the importance of the exercise in question is very likely to make staff adopt a "belt and braces" attitude and continue with their conventional charts simultaneously. This can be prudent and useful initially, but additional clerical help will be needed.

The format of the print-out is significant. It must contain the necessary information and be easy to read.

Confusion between prospectus course and other abbreviations and what the computer can best cope with will inevitably throw up some anomalies, which often generate minor internal college friction.

In most cases the computer will be outside the college. One therefore has to rely very much on staff not normally under college control.

The computer can break down, delaying college print-outs.

The first month of operation should not be the start of success. This time is notoriously difficult.

A large number of amendments will occur; probably many more than the college or computer staff anticipated.

Installing such a system forces staff to analyze college procedures and brings many problems to light.

A. B. Shaw is the principal and David Polak the vice-principal of Langford College, Cleveland.

Printers

Continued from page 49

works very well as long as the voltage stays above 235v but when the voltage dips below that level, it produces a large number of spurious characters and eventually jams. If it is not disconnected from the mains, the solenoids will burn out. Similar problems occur with some interface units, which work just fine with stable electricity supplies on the manufacturer's test bench but fail to work or produce unreliable signals when connected to the school's main supply. Insecure connections, especially those made in adapter plugs or extension sockets, can cause a flicker of electrical current that can make some of the sensitive electronic components burn out. When extension leads or adapter plugs are used, they should be the very best obtainable and they should be checked regularly.

Choosing and Buying a Printer The best method of obtaining a suitable, reliable printer for schools computing is to consult a competent, reputable microcomputer specialist firm and stick with them for all equipment and supplies. Unlike some of the domestic appliance and business equipment firms that have gone into the "micro" trade as a sideline, the specialist firms employ at top executive level people with experience in microcomputer equipment. They will have surveyed the market for suitable printers for their customers, and will be able to check out equipment for suspect assembly techniques and components; they will be able to provide quick, competent service and usually can deliver printers faster than the other firms, because they maintain an expensive workshop and technical staff.

Buying from "bargain" dealers means that when the teacher has technical queries he is in turn to be helped and unlikely to get the benefit of expert equipment testing and evaluation that is done by the specialist firms. Another problem with "bargain" buying is that when something goes wrong with the equipment—and it inevitably

extra Standard applications

Producing computer software is an expensive business, and although universities and polytechnics have often benefited from grants and research staff, schools have always been the poor relations in that regard. It is money to be spent actually in the schools. So individual schools can ill afford to allow software to be produced that cannot be transferred to other schools.

For such communication to take place, it is necessary to have common standards that everybody can understand. For example, to restrict the basic keywords used to a common subset, and to have guidelines about the sort of dialogue that a user should expect. Muse has recently published a set of standards for applications programs for education.

First, we must state what these standards do not attempt to do. It is impossible to achieve a non-trivial subset of BASIC that will run on any machine. With an eye to the future, only microcomputer implementations of BASIC have been taken into consideration. In fact, only those microcomputers which are most commonly seen in schools have been included in the research. Through restrictions like these, the use of BASIC keywords, it has been made possible to use the full range for any machine.

It is arguable that it is more important to have standards for the use of software than to use software to have standards for the construction of programs. But it

would be immensely difficult to do this and still allow individual style and let collective progress continue. If the Chelsea style, which at the time seemed revolutionary and over-the-hill, had become mandatory then perhaps we would never have seen the Hufield style which now seems to represent an equal advance.

The full standards should be read by anyone attempting to conform with them, but the following explains some of the ideas contained in the minimum requirements.

Programs must keep to the subset of BASIC that is defined. This allows the use of such functions as MID\$(X\$,A,B) and such statements as ON FN(X) GOSUB 1100, 1200, 1300. It is fortunate that cover machines have derived their versions of BASIC from a common source (though not directly), and for this reason there is a lot in common between them. It is also surprising that most of the idiosyncrasies of the original have survived through several generations. The way that BASIC should actually be expected to behave is also described.

Programs must be constructed in modules. This means that when a program is being composed one can concentrate on the educational aims. Each of these modules can be broken down into smaller modules. The advantage of this is that each module can be tested independently, and it may even be used again in another program. A number of

tested subroutines have been made available to deal with the common needs, and authors will be expected either to use these or to use their own versions starting at the same line numbers. These subroutines have been written where possible in BASIC that is common to most machines, and using special variable names.

Where it is not possible to write in machine-independent BASIC, a number of subroutines have been written for particular machines. Authors will therefore have a range of standard routines available which have been thoroughly tested, and which will work in any program. Further, these routines will have been already translated on to other machines, and therefore the author's program may also be transferred to these other machines.

MUSE has undertaken to build up and then maintain a library of such routines as may prove useful to authors and teachers. Those who have already translated on to other machines, and therefore the author's program may also be transferred to these other machines.

In order that the standard routines should be available to different writers on different machines, it is necessary to reserve some variable names for use within the routines themselves and for passing values to and from the routines. For

JOHN A. COLL and CHARLES SWEETEN on a set of standards for applications programs published by MUSE

ideas contained in these standards without setting them out in full, which would take up too much space, so it may be helpful to give a list of the sections which are contained in the full standards. An absolute minimum is set out which all programs must adhere to, while the rest are suggestions which are discussed fully. User proofing is discussed briefly with special reference to user proof input and program output. The "Common style" of presentation as developed by Hertfordshire is commended. Recommendations are made for option lists and menus. Default values are recommended. The syntax of BASIC is defined in great detail, not only in terms of the syntax itself, but in terms of the effects actually are. Line numbering is covered and allowed variable names are given. The standards finish with 13 pages of subroutines and specifications for subroutines.

*MUSE is a Micro computer User in Secondary Education. *Acen: MUSE, 48 Chadwell Way, Catshill, Bromsgrove B61 0JT. *MUSE Program Standards are available at £3.00 (£2.00 to members, payable to MUSE, from Charles Sweeten, 20 Rockingham Hill, Computers in Schools, is published by Longman Group Ltd and is sent to members of MUSE. John A. Coll is chairman and Charles Sweeten is secretary of MUSE.

It is impossible to explain all the

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The bright pink and blue covers of Computer Studies Part 1 and 2 are in sharp contrast to the drab khaki of their predecessors; the contents, too, are very different and are up to date as possible.

Computer Studies, Book 1 introduces the computer as a data processing device. It contains chapters on the low level language BASIC and the high level language BASIC; the chapters on programming are arranged in easy stages and are interspersed with sections on representing and storing data; the people involved with the computer and brief outlines of seven applications.

Computer Studies, Book 2 is a continuation of the first book. It begins with a revision of the BASIC statements already introduced and then has a mixture of sections on systems analysis, programming, languages, control software, logic circuits, four detailed applications and the more advanced features of BASIC.

Computer Studies, Book 3 does not continue logically or chronologically from the other books because it was written to complement the original versions of Books 1 and 2. In spite of some repetition there is a lot of new material with sections on file and file processing in BASIC, applications software and simulation.

Further Questions for Book 1 is an A4 book of additional questions and their answers, plus A4 loose sheets with copies of these questions which can be duplicated for students' use. The questions are numbered to continue in sequence with those in Book 1. (The an-

Colourful additions

Last year ICL's Computer Education in Schools project celebrated its tenth birthday.

The Computer Education in Schools project, published by ICL CES, has a new look.

Part 1. Students' Book, Computer Studies Book 1. 0 903885 174. £3.50; Teachers' Guide, expected September, 1980. 0 903885 181. Further Questions, 0 903885 220. £10.00.

Part 2. Students' Book, Computer Studies Book 2. 0 903885 190. £3.50; Teachers' Guide, 0 903885 191. (in preparation). 0 903885 213. Part 3. Students' Book, Computer Studies Book 3. 0 903885 131. £3.50; Teachers' Guide, 0 903885 141. X. £15.00; Supplementary Material £1.00.

Revision Questions for Computer Studies: 0 903885 212. £12.00 for 10 copies.

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swers to the questions in Book 1 will be included in this Teachers' Guide which is not yet available. Similar books for Further Questions and a Teachers' Guide for Book 2 are in preparation.

The Teachers' Guide for Book 1, a hefty tome, is packed with background information related to the topics in the student's book. Supplementary Material is a loose-leaf book of loose sheets which contain copies of the further questions in the Teachers' Guide. Supplementary Photographs is a set of 77 A4 reproductions of photographs.

Revision Questions for Computer Studies will be welcomed by students and teachers. The first section consists of 15 test papers each containing 10 short questions on a variety of topics. The second section consists of over 100 questions grouped under broad topic headings.

The programming elements of these books are strictly related to the implementation of BASIC on ICL machines, but this does not mean that the books are unsuitable for use by schools using other computing facilities, as long as the teacher is aware of the differences which may arise. Pupils can cope with this as the system computer is designed to run on ICL machines but they will need clear guidelines on the variations of string handling facilities and file processing.

The three students' books cover most of the topics in the CES syllabus; however, 7 are surprised at two-dimensional arrays are not included and there is very little emphasis on the preparation and analysis of systems flowcharts in Book 3. Apart from these minor criticisms the books and their associated materials provide a sound foundation for Computer Studies Courses at CSE and O level, although further texts will be needed for O level candidates.

The Teachers' Guide for Book 3 is expensive but it provides a reference source of information for the teacher who is new to the subject. I have found the Revision Questions a valuable aid in the classroom; pupils have worked through the questions at their own pace referring to their notes and a reference of text books; they have thus revised most of the non-programming elements of their CSE syllabus.

The original versions of Books 1 and 2 were the backbone of many early Computer Studies Courses; now I am sure that the new versions will deserve a place in our classrooms too.

Further Questions for Book 1 is an A4 book of additional questions and their answers, plus A4 loose sheets with copies of these questions which can be duplicated for students' use. The questions are numbered to continue in sequence with those in Book 1. (The an-

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The position
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This Outer London Borough is situated on the Eastern side of Central London, on the fringe of the Green Belt. There is easy access to London. Unless otherwise stated, Closing date is 14 days after the appearance of this advertisement. For all Secondary School Posts, letters of application should be sent to the Headteacher concerned giving full curriculum vitae and quoting two referees. For all other posts application forms are available from (s.a.e. please) the Director of Educational Services, Mercury House, Mercury Gardens, Romford, Essex. Applications requiring acknowledgement and requests for forms and further details should be accompanied by a stamped addressed envelope. There is a scheme for removal expenses — details on request.

SECONDARY SCHOOLS:

Bedford Park School (Roll 1180 Co. Ed.)
Appley Drive, Romford, RM3 7SU.
Telephone: Ingrebourne 71331.
Headteacher: R. J. Bracken, B.A.
S.P.A. Allowance £201276 p.a. payable.

TEACHER AS HEAD OF PHYSICS

Scale 3, required September 1980 or as soon as possible thereafter to be responsible for Physics up to 'A' level.

TEACHER OF ENGLISH/DRAMA

Scale 1, required September 1980 to teach English and Lower School Drama.

TEMPORARY TEACHER OF SCIENCE

Scale 1, required September 1980 to teach in years 1-3 (any discipline considered) with ability to teach 'O' level/C.S.E. an advantage. Well equipped laboratories and detailed curriculum planning. This post is temporary during the maternity leave of absence of the present post holder.

Chafford School (Roll 980 Co. Ed.)
Lamb Lane, Rainham, Essex.
Telephone: Rainham 52211.
Headteacher: M. S. Justing, M.A.

TEACHER OF MATHEMATICS

Scale 1, required as soon as possible to teach SMP Mathematics to any level offered, but preferably to include 'A' level work in a well established department. A temporary appointment would be considered.

TEACHER OF SCIENCE

Scale 1, required as soon as possible to join an expanding department to teach Combined Science in the first 2 years and a specific Science to higher years. Opportunity exists to become involved in organising field work.

Dury Falls School (Roll 834 Co. Ed.)
Wingfield Lane, Hornchurch, RM11 3TB.
Telephone: Hornchurch 52338.
Headteacher: A. W. Grantham, B.Sc.

HEAD OF PHYSICS

Scale 2, required September 1980 or as soon as possible thereafter, to join a well established team of science staff. Physics is taught throughout the school to University Entrance level. The department has well equipped laboratories and two technicians.

TEACHER OF GENERAL SCIENCE

Scale 1, required September 1980 or as soon as possible thereafter to share in the teaching of a strong department. Ideal post for new entrant or someone wishing to return to teaching. Informal visits welcome.

TEACHER OF BOYS P.E.

Scale 1, required September 1980 or as soon as possible thereafter, with subsidiary Geography. Good opportunity for new entrant to the profession.

TEACHER OF ART

Scale 1, required September 1980 or as soon as possible thereafter to teach the subject throughout the school to C.S.E./'O' level standard. Ideal opportunity for beginner. Please state special areas of interest.

Harrow Lodge School (Roll 750 Boys)
Hyland Way, Hornchurch, Essex.
Telephone: Hornchurch 52041.
Headteacher: W. S. Vovell-Richards, B.A.

TEACHER OF FRENCH

Scale 1, required September 1980 or as soon as possible thereafter. The Department teaches to C.S.E./'O' level and C.S.E. and from September will probably have established an 'A' level course. The post is suitable for a first appointment.

TEACHER OF SCIENCE

Scale 3, required as soon as possible. Ability to teach Physics to 'A' level an advantage. The School is a split site with three specialist laboratories on the Upper School site and two general laboratories on the Lower School site. The subjects are taught to C.S.E./'O' and 'A' levels.

TEACHER OF MATHEMATICS

Scale 1, required as soon as possible.

TEMPORARY TEACHER OF ENGLISH

Scale 1, required September 1980 during the maternity leave of absence of the present postholder. The Department is well organised and enthusiastic and the subject is taught to 'A' level.

Forest Lodge School (Roll 1421 Co. Ed.)
Loring Lane, Collier Row, Romford RM2 2LD.
Telephone: Romford 41113.
Headteacher: K. D. Barnes, B.A.

TEACHER OF FRENCH

Scale 1, required September 1980 or as soon as possible thereafter to join a thriving Modern Languages Department in its own right. Ability to teach German would be an advantage. The 'Edual' Course has recently been introduced. The Department has an active scheme of visits and exchanges and offers 'A' level courses in both languages.

TEACHER OF MATHEMATICS

Scale 2, required September 1980 or as soon as possible thereafter. A suitably qualified and experienced teacher to join a large, stable Maths Department located in its own area of the School. There is a modern outlook with its own Mode 3 C.S.E. course. The Computer Studies courses are to be expanded. Candidates should indicate the contribution they feel they could make to the Department which could include 'A' level teaching.

TEACHER OF RELIGIOUS EDUCATION

Scale 1, required September 1980, to teach Religious and Moral Education in the Social Sciences area of the School as part of the Social Education Programme. Please indicate interests and other teaching subjects e.g. Sociology, Economics or Geography.

TEACHER OF BOYS P.E.

Scale 1, required September 1980 to join a thriving department. Facilities include Gymnasia, indoor swimming pool and extensive playing fields. Please state main interests/abilities — a second teaching subject may be available.

TEACHER OF ENGLISH

Scale 1, required September 1980 to join a large thriving department. Interest in Drama or Humanities area of Lower School would be a recommendation. Please indicate interests.

Gaynes School (Roll 1068 Co. Ed. — Sixth Form 100)
Brackendale Gardens, Upminster, RM14 3UX.
Headteacher: L. K. M. Bonny, M.Ed., F.C.P.
Telephone: Upminster 22960.

TEACHER OF CHEMISTRY

Scale 1, required September 1980 or as soon as possible thereafter. A graduate teacher of Chemistry required to join a strong department. Teaching will include C.S.E./'O' level/'A' level.

TEACHER OF GEOGRAPHY

Scale 1, required September 1980. A Graduate Teacher of Geography required to teach G.C.E. 'O' and 'A' level and C.S.E. classes as well as groups in the Lower School.

Hall Mead School (Roll 1080 Co. Ed.)
Marlborough Gardens, Canham, Upminster, Essex.
Telephone: Upminster 25884.
Headteacher: B. E. Saunders, B.A.

TEACHER OF MATHEMATICS

Scale 1/2, required September 1980 or as soon as possible thereafter to assist with teaching SMP throughout the school to 'A' level. Scale 2 available to an experienced teacher but the post could well suit a new entrant to the profession. An additional advantage would be a willingness to assist computer studies (school has its own micro-computer). Informal visits welcome.

TEACHER OF PHYSICS

Scale 1/2, required September 1980 to teach the subject throughout the school to 'A' level. Excellent laboratory facilities. Scale 2 available to an experienced teacher but the post could well suit a new entrant to the profession.

TEACHER OF HOME ECONOMICS

Scale 1, required September 1980 to share the teaching of the subject throughout the school. Excellent facilities.

Maylands School (Roll 890 Girls)
Broadstone Road, Hornchurch, RM12 4AJ.
Telephone: Hornchurch 41637.
Headteacher: Mrs. M. F. Brewer, B.Ed.

TEACHER OF GEOGRAPHY

Scale 1, required September 1980 or as soon as possible thereafter. Ability to teach History and English desirable.

TEACHER OF FRENCH

Scale 1, required September 1980 or as soon as possible thereafter to teach the subject across the 11-16 age and ability range with the possibility of some 'A' level work for a suitable candidate.

TEMPORARY TEACHER OF HOME ECONOMICS

Scale 1, required September 1980 or as soon as possible thereafter to teach the subject across the 11-16 age and ability range. Ability to help with the Child Care Course in Year 4 would be an advantage. This is a temporary post during the maternity leave of absence of the present postholder.

St. Edwards School (Roll 1060 Sixth Form 150)
Aired C. of E. Comprehensive.
London Road, Romford, Essex.
Telephone: Romford 42060.
Headteacher: T. E. Givnall, M.A.

TEACHER OF MATHEMATICS

Scale 2, required September 1980 or as soon as possible thereafter. Ability to take substantial Advanced level load in statistics essential. Very strong department with over 80 'A' level pupils. Tradition of outstanding results. Good facilities. Interest in extra curricular activities most desirable.

TEACHER OF MATHEMATICS

Scale 1, required September 1980 or as soon as possible thereafter, with the ability to teach a branch of the subject to 'A' level essential in department with over 80 'A' level pupils. Interest in Computer Science could be an advantage.

Sacred Heart of Mary Girls' School (Roll 524)
St Mary's Lane, Upminster, Essex.
Telephone: Upminster 22680.
Headteacher: Sister St. Esprit, M.A.

TEACHER OF PHYSICS

Scale 2, required September 1980 or as soon as possible thereafter to teach the subject to 'O' and 'A' level with Nuffield Combined Science in the Lower School. Scale 2 post available to a suitably experienced and qualified applicant.

Chase Cross School (Roll 1250 Co. Ed.)
Hoversing Road North, Romford, Essex.
Telephone: Romford 47353.
Headteacher: E. A. Steward, B.A.

TEACHER OF HOME ECONOMICS

Scale 1, required September 1980 or as soon as possible thereafter to teach Cookery to C.S.E. and 'O' level and Lower School Needlecraft.

TEACHER OF CHEMISTRY

Scale 1, required as soon as possible to teach the subject throughout the school. There are well established courses to C.S.E. and 'O' and 'A' level in all 3 Sciences within an enthusiastic department. There would also be an opportunity to share in the teaching of some Lower School Science.

TEACHER OF BUSINESS STUDIES

Scale 1/2, required September 1980 or as soon as possible thereafter. A well qualified and enthusiastic teacher to join a well established department offering a wide range of subjects to C.S.E., R.S.A. HII and G.C.E. 'O' and 'A' level. Applications are requested from candidates offering a selection of the following subjects — Economics, Book-keeping, Accounts, Commerce, Office Practice, Typewriting and Shorthand. Scale 2 post available for a suitable applicant.

Royal Liberty School (Roll 897 Boys)
Upper Brentwood Road, Romford, RM2 6JJ.
Telephone: Romford 4054.
Headteacher: J. P. Coles, M.A.

TEACHER OF MATHEMATICS

Scale 1, required as soon as possible to teach the subject to C.S.E. and 'O' level with some 'A' level work. Interest in Boys P.E. would be an advantage.

TEACHER OF FRENCH

Scale 1/2, required September 1980. Ability to teach the subject to C.S.E./'O' level required. A new entrant to the profession would be considered.

Sanders Draper School (Roll 987 Co. Ed.)
Suttons Lane, Hornchurch, Essex.
Telephone: Hornchurch 43088.
Headteacher: C. Rogers, B.Sc.

TEACHER OF GIRLS' P.E.

Scale 1, required September 1980. The ability to offer a strong subsidiary subject — preferably music would be an added advantage.

TEMPORARY TEACHER OF GEOGRAPHY

Scale 1, required September 1980 during the secondment of the present postholder. Ability to offer mathematics as second subject preferred.

TEMPORARY TEACHER OF SCIENCE

Scale 1, required September 1980 for 1 term during the maternity leave of absence of the present postholder. The post is mainly to teach Biology.

TEACHER OF ENGLISH

Scale 3, required September 1980, or as soon as possible thereafter, as second in the department to accept the additional responsibility for organisation and administration of the school library.

Marshall Park School (Roll 1400 Co. Ed. — Sixth Form 85)
Haversing Drive, Romford, Essex.
Telephone: Romford 24134.
Headteacher: T. B. Coomes, B.Sc.

TEACHER OF ART

Scale 1, required September 1980 to join a large Art and Photography Department. Please state specialist interests.

TEACHER OF TECHNICAL DRAWING

Scale 2, required September 1980 or as soon as possible thereafter to teach the subject in years 3-5 including C.S.E. and G.C.E. involvements.

TEACHER OF MATHEMATICS

Scale 1, required September 1980 initially for work up to G.C.E. 'O' level. Mainly traditional with syllabus under review. Educational Computer facilities available.

TEACHER OF FRENCH

Scale 1, required September 1980 or as soon as possible thereafter. Full range of examination work available for a suitable candidate.

TEACHER OF COMMERCIAL SUBJECTS

Scale 1, required September 1980 or as soon as possible thereafter.

TEACHER OF COMMERCIAL SUBJECTS

Scale 1, required September 1980 or as soon as possible thereafter.

TEACHER OF COMMERCIAL SUBJECTS

Scale 1, required September 1980 or as soon as possible thereafter.

TEACHER OF COMMERCIAL SUBJECTS

Scale 1, required September 1980 or as soon as possible thereafter.

SECONDARY

Modern Languages continued

NEWMAN

(London Borough of)

BRAMPTON MANOR SCHOOL

Human Road, London SW6

Headteacher: Mr. D. Williams, M.A.

French and/or German

Scale 1, required September 1980, a TEACHER OF FRENCH in a Modern Languages Department.

London Allowance £200.

Further details from the Headteacher, to whom applications should be sent by 27th June 1980.

Director of Education, Education Offices, Broadway, Stratford, London E15 3JH.

NORTH YORKSHIRE

COUNTY COUNCIL

ST. JOHN FISHER R.C. HIGH SCHOOL

Harrogate Road, Harrogate

Headteacher: Mr. J. H. H. H. H.

Scale 1, required September 1980, a TEACHER OF FRENCH in a Modern Languages Department.

London Allowance £200.

Further details from the Headteacher, to whom applications should be sent by 27th June 1980.

Director of Education, Education Offices, Broadway, Stratford, London E15 3JH.

NOTTINGHAMSHIRE

COUNTY COUNCIL

ST. JOHN FISHER R.C. HIGH SCHOOL

Harrogate Road, Harrogate

Headteacher: Mr. J. H. H. H. H.

Scale 1, required September 1980, a TEACHER OF FRENCH in a Modern Languages Department.

London Allowance £200.

Further details from the Headteacher, to whom applications should be sent by 27th June 1980.

Director of Education, Education Offices, Broadway, Stratford, London E15 3JH.

REDBRIDGE

COUNTY COUNCIL

ST. JOHN FISHER R.C. HIGH SCHOOL

Harrogate Road, Harrogate

Headteacher: Mr. J. H. H. H. H.

Scale 1, required September 1980, a TEACHER OF FRENCH in a Modern Languages Department.

London Allowance £200.

Further details from the Headteacher, to whom applications should be sent by 27th June 1980.

Director of Education, Education Offices, Broadway, Stratford, London E15 3JH.

STAFFORDSHIRE

COUNTY COUNCIL

ST. JOHN FISHER R.C. HIGH SCHOOL

Harrogate Road, Harrogate

Headteacher: Mr. J. H. H. H. H.

Scale 1, required September 1980, a TEACHER OF FRENCH in a Modern Languages Department.

London Allowance £200.

Further details from the Headteacher, to whom applications should be sent by 27th June 1980.

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Technical Studies

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County of Cleveland

SECONDARY SCHOOLS

11-16 SCHOOLS

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BEDFORDSHIRE EDUCATION SERVICE

COUNTY STAFF TEACHERS

2 teachers (Scale 3) are required to join this permanent team of teachers. Wide experience in the educational approach to designing and making effective and being to teach Cambridge 'O' Level Modular Technology an advantage.

A well qualified and experienced teacher is required to join the Permanent Supply Team to teach MODERN LANGUAGES particularly FRENCH and GERMAN (Scale 3). Applicants should have experience of teaching in a variety of situations, particularly in the 11 to 16 age range as they will be required to teach in any school in the county where the need arises.

Excellent User Car Allowance payable. Assisted Car Purchase Scheme.

Applications and further details obtainable from: D. P. J. Browning, M.A., Chief Education Officer, County Hall, Bedford, MK43 0JH. 4th July 1980.

Bedfordshire County Council

WEST GLAMORGAN

County Council

Applications are invited from suitably qualified teachers for the following posts in the Authority's service, to commence in September, 1980, or as soon as possible thereafter unless otherwise stated.

CENTRAL OFFICE APPOINTMENTS
 (Director of Education, Princess House, Princess Way, Swansea.)

Sandfields Comprehensive School
 Southdown View, Port Talbot (Mixed) (1,265 on roll). (Age range 11 to 18 years.)

A HEADTEACHER is required for this Group 12 School. To commence as soon as can be arranged. This is a re-advertisement. (Post Ref. CS6/11.4.80/T.E.S.)

SWANSEA DISTRICT APPOINTMENTS
 (District Education Officer, Swansea District Education Office, Princess House, Princess Way, Swansea.)

Dever Comprehensive School
 De La Beche Street, Swansea (Mixed) (1,000 on roll). (Age range 11 to 18 years.)

To teach MATHEMATICS. Scale 1. (Post Ref. SS/2.14.80/T.E.S.)

Oystermouth Junior Comprehensive School
 Newton Road, Oystermouth, Swansea (Mixed) (435 on roll). (Age range 11 to 13 years.)

An experienced graduate is required to take charge of the ENGLISH Department. Scale 3. (Post Ref. SS/3.14.80/T.E.S.)

Penrhafod Comprehensive School
 Penrhafod Road, Hafod, Swansea (Mixed) (1,300 on roll). (Age range 11 to 18 years.)

To teach SCIENCE throughout the School. An ability to assist in the teaching of MATHEMATICS would be an advantage. Scale 1. To commence as soon as can be arranged. (Post Ref. SS/4.14.80/T.E.S.)

Sketty Infants' School
 Carneg Road, Ynys, Swansea (Mixed) (187 on roll). (Age range 5 to 7 years.)

A DEPUTY HEADTEACHER is required for this Group 4 School. (Post Ref. SS/5.14.80/T.E.S.)

GORSEINON DISTRICT APPOINTMENTS
 (District Education Officer, Gorseinon District Education Office, T. Elton, Princess Street, Gorseinon, West Glamorgan.)

Mynyddbach Comprehensive School
 Heol Ddu, Treboeth, Swansea (Mixed) (1,395 on roll). (Age range 11 to 18 years.)

To teach ENGLISH to C.S.E./O level. Scale 1. This is a social priority school. (Post Ref. GS/6.14.80/T.E.S.)

NEATH DISTRICT APPOINTMENTS

(District Education Officer, Neath District Education Office, Cadbury Road, Neath.)

Cefn Saeon Comprehensive School
 Cefn Saeon, Neath (Mixed) (959 on roll). (Age range 11 to 18 years.)

To teach FRENCH and SPANISH to C.S.E. and 'O' level. Scale 1. (Post Ref. NS/11.12.80/T.E.S.)

Swansea Comprehensive School
 Brion Ferry, Neath (Mixed) (807 on roll). (Age range 11 to 16 years.)

A Science teacher is required to teach CHEMISTRY in the 13 to 16 age range and COMBINED SCIENCE in the 11 to 13 age range. This is a temporary post commencing 1st September, 1980, during the absence of a permanent member of staff on secondment to a one-year course. Scale 1. (Post Ref. NS/10.13.80/T.E.S.)

Dwyr-Felin Comprehensive School
 Dwyr-Felin Road, Neath (Mixed) (1,830 on roll). (Age range 11 to 18 years.)

(i) To teach GEOGRAPHY across the age and ability range. The possession of a Geography Degree and/or the ability to offer another teaching subject would be advantageous. Scale 1. (Post Ref. NS/9.14.80/T.E.S.)

(ii) To teach MATHEMATICS across the age and ability range. The possession of a Mathematics Degree and/or the ability to offer other subjects, e.g. Elementary Technical Drawing or Physics Sciences, would be advantageous. Scale 1. (Post Ref. NS/9.15.80/T.E.S.)

AFAN DISTRICT APPOINTMENTS
 (District Education Officer, Afan District Education Office, 40 Talbot Road, Port Talbot.)

Dyffryn Comprehensive School
 Bertha Road, Margam, Port Talbot (Mixed) (1,200 on roll). (Age range 11 to 18 years.)

To teach MATHEMATICS mainly in the upper School and to participate in the development of COMPUTER STUDIES and related areas of the curriculum. Scale 1. (Post Ref. AS/7.16.80/T.E.S.)

Cwmaman Junior School
 Cwmaman, Port Talbot (Mixed) (289 on roll). (Age range 7 to 11 years.)

An experienced teacher is required to take a class and also to be responsible for the development and co-ordination of MATHEMATICS and SCIENCE in the School. Scale 3. (Post Ref. AP/3.17.80/T.E.S.)

Cymmer Afan Primary School
 Cymmer, Port Talbot (Mixed) (95 on roll). (Age range 5 to 11 years.)

An experienced teacher is required to take a Junior class and also to be responsible for MATHEMATICS throughout the School and to assist with BOYS' GAMES. Scale 2. This is a social priority school. (Post Ref. AP/2.18.80/T.E.S.)

Application forms and further particulars of specific posts are available from the addresses shown (i.e. Central Office for the first post listed and the appropriate District Education Officer for all other posts). Please send stamped addressed envelopes (a) quoting the appropriate post reference number(s) and (b) enclosing a recent photograph. The closing date for the receipt of completed application forms is THURSDAY, 19th JUNE, 1980.

John Davies, Director of Education

BARBADOS COMMUNITY COLLEGE

The Barbados Community College, Howell's X Road, St. Michael, Barbados requires for September 1, 1980, a

Tutor or Instructor

in Mechanical or Production Engineering teaching to level of City & Guilds of London Institute. Appointment is permanent or on contract. Contract teachers are eligible for gratuity of 20 per cent of salary.

Salary Scale
Tutor—Bds\$20,592 per annum.
Instructor—Bds\$17,544-18,792 per annum
(US\$1.00 = Bds\$2.00).

Qualifications
Tutor—A Degree in Mechanical or Production Engineering.
OR Membership of relevant Professional Engineering Body OR Higher National Diploma/HNC followed by five years' experience.
Instructor—Higher National Diploma/Higher National Certificate. Teaching experience an asset.
Applications should reach the Principal, Barbados Community College, not later than July 1, 1980 and should be accompanied by (a) two recent testimonials; (b) names of two referees and (c) photocopies of qualifications.

METROPOLITAN BOROUGH OF Rochdale

EDUCATION DEPARTMENT

GROUP HOUSEPARENT

Knowl View Residential School
Norden Road, Bamford, Rochdale
Grade 4, £5,268-£5,784 (unqualified), rising to £6,174 if qualified.

A vacancy exists for a suitably qualified and experienced person who is able to cater for the needs of a group of 12 disturbed boys at this residential school. The successful applicant will possess the personality and ability to develop caring and supportive relationships in a firm and consistent manner.

Appointees may be resident or non-resident.
Informal enquiries to Mr. T. Hopwood (Headmaster at the school), telephone Rochdale 46267.

Application forms and further details available (by quoting Ref. No. D.887) from the Chief Personnel Officer, P.O. Box 88, Municipal Offices, Floor 9, Smith Street, Rochdale OL16 1XG, to whom they may be returned by 20th June 1980. (Application forms may also be obtained by telephoning Rochdale 47474, Ext. 862.)

Hounslow

COMMUNITY EDUCATION SERVICE

Required September, 1980, or January, 1981

2 COMMUNITY EDUCATION TUTORS

Salary: Burnham F.E. Lecturer 1 (£3,768-£6,438) + London Weighting £408. Under Review.

Responsible for Adult Education programme at Longford and Chiswick Community Education Centres which are based on eight-form entry comprehensive schools.

Application forms and further details available from: J. F. Moller, B.A., Principal of Community Education, Spring Grove Centre, Thornbury Road, Isleworth, Middlesex TW7 4HG. Tel. No. 01-588 3697.
Closing Date: Two weeks from advertisement appearing.
A. Groves, Director of Education.

County of Cleveland

SOCIAL SERVICES DEPARTMENT

TEACHER (Children's Scale)
Required at FARMHILL ROAD COMMUNITY HOME which caters for 34 boys. Applicants are required for this post to be a fully qualified teacher with a high level of personal initiative, stamina and energy. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Home, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Social Services, County of Cleveland, 100, Victoria Road, Middlesbrough, Cleveland TS1 1JL. Closing date: 23rd June 1980.

UNIVERSITIES

continued

SIRRA LONE
NIAJIA UNIVERSITY COLLEGE
SIRRA LONE is a postgraduate student in the Department of Education, NIAJIA UNIVERSITY COLLEGE, Sirra LONE, who has a first class honours degree in Education. She is currently working as a research officer in the Department of Education, Sirra LONE. She is also a member of the Sirra LONE Education Society. She is a very capable and hardworking student who is always ready to take on new challenges. She is a very popular student who is well liked by her colleagues and friends. She is a very capable and hardworking student who is always ready to take on new challenges. She is a very popular student who is well liked by her colleagues and friends.

UNIVERSITY APPOINTMENTS
are also advertised in THE TIMES HIGHER EDUCATION SUPPLEMENT

Colleges of Higher Education

Other Appointments

DEBESHIRE

DEBESHIRE COLLEGE OF EDUCATION

SENIOR LECTURER/MECHANICAL ENGINEERING

Two vacancies in the Department of Mechanical Engineering, DeBeshire College of Education, DeBeshire, to fill the posts of Senior Lecturer and Lecturer in Mechanical Engineering. The successful applicants will be responsible for the teaching and supervision of students in the Department of Mechanical Engineering. They will also be responsible for the development of the Department of Mechanical Engineering. Applications should be sent to the Director of Education, DeBeshire College of Education, DeBeshire, by 23rd June 1980.

QUALIFYING IN ELECTRONIC TESTING

One vacancy in the Department of Electronic Testing, DeBeshire College of Education, DeBeshire, to fill the post of Lecturer in Electronic Testing. The successful applicant will be responsible for the teaching and supervision of students in the Department of Electronic Testing. They will also be responsible for the development of the Department of Electronic Testing. Applications should be sent to the Director of Education, DeBeshire College of Education, DeBeshire, by 23rd June 1980.

Community Homes and Associated Institutions

Headships and Deputy Headships

LIVERPOOL

CATHOLIC SOCIAL SERVICES DEPARTMENT

INDEPENDENT TUTOR

Applications should be sent to the Director of Social Services, Catholic Social Services Department, Liverpool, by 23rd June 1980.

Other Appointments

Other Appointments

Other Appointments

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Other Appointments

Other Appointments

FIVE

DEBESHIRE COLLEGE OF EDUCATION

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Other Appointments

absence of the Deputy Head for the educational aspects of the Unit which accommodates 20 disturbed and delinquent boys. At the same time, the unit will undertake normal teaching duties. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Unit, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Social Services, County of Cleveland, 100, Victoria Road, Middlesbrough, Cleveland TS1 1JL. Closing date: 23rd June 1980.

CITY OF SALFORD

EDUCATION DEPARTMENT

PARK HOUSE OBSERVATION AND ASSESSMENT CENTRE

Required from September 1, 1980, a Deputy Principal (Education and Social Services) to take over the duties of the Principal of the Park House Observation and Assessment Centre. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Centre, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Education, City of Salford, Salford, by 23rd June 1980.

HUMBERSIDE

EDUCATION DEPARTMENT

DEPUTY PRINCIPAL (EDUCATION AND SOCIAL SERVICES)

Required from September 1, 1980, a Deputy Principal (Education and Social Services) to take over the duties of the Principal of the Park House Observation and Assessment Centre. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Centre, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Education, Humberside, Humberside, by 23rd June 1980.

ST. PETER'S COMMUNITY HOME (E)

St. Peter's, Ramsey, Cambridgeshire

This is a Roman Catholic Home for 12 boys, with a view to their education and training. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Home, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Education, St. Peter's, Ramsey, Cambridgeshire, by 23rd June 1980.

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YOUTH AND COMMUNITY SERVICE

continued

COMMUNITY ARTS WORKER

To set up a new project in Dept. For C.I. 140 p.a. for 12 months.

CLAYDON EDUCATION COMMITTEE

ASSISTANT YOUTH SERVICE ADVISER

A new appointment to a post of Assistant Youth Service Adviser. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Centre, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Education, Claydon, Claydon, by 23rd June 1980.

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CLAYDON EDUCATION COMMITTEE

ASSISTANT YOUTH SERVICE ADVISER

A new appointment to a post of Assistant Youth Service Adviser. The successful applicant will be responsible for the educational and social needs of the boys, and will be expected to work closely with the Head of the Centre, the Social Worker, and the other staff. The post is a full-time position, with a salary of £5,400 per annum, plus London weighting of £408. Applications should be sent to the Director of Education, Claydon, Claydon, by 23rd June 1980.

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GABBITAS-THRING

**British Embassy School
BUDAPEST**

A Class Teacher is required for September, to teach General Subjects to Top Infants/Lower Juniors. The ability to teach Music throughout the School would be an advantage. Candidates should be qualified and have a minimum of three years' experience in a British School. Applicants should be single and the preferred age-range is 25 to 35. Salary will be in the range £4,500 to £5,500, tax free. Accommodation is provided free of charge. The contract is for one year, renewable. The School follows the standard English primary school syllabus. At present there are 50 to 60 pupils of all nationalities in the School, but the medium of instruction is English.

For further details and an application form, please contact

Mrs A. Longworth,
Advertised Posts Department
Gabbitas-Thring Services Ltd
8, 7 and 6 Backville Street
London W1X 2BR
Telephone 01-734 0161

**YOUTH AND COMMUNITY SERVICE
continued**

LIVERPOOL

WARRINGTON
SHEPPARD YOUTH AND COMMUNITY CENTRE
North (Liverpool)
JNC 341 627-27-218
Overseas Plus 6209 BHA
62-503-510 (unqualified)

HEADTEACHER
Applications are invited for the post of Headteacher of this large and well established Co-educational primary school. The successful candidate will be responsible for the vision and leadership of the school, and will be expected to develop and maintain high standards of achievement. The post is full-time, with a salary of £10,000 per annum, plus pension and other benefits. The successful candidate should have a minimum of 10 years' experience in a similar post, and should be a member of the General Teaching Council for England. Applications should be sent to the Director of Education, Warrington, in a confidential envelope, and should be accompanied by a curriculum vitae and references. Closing date: 15th June 1980.

**Overseas
Appointments**

LEBANON
NATIONAL COLLEGE OF
TECHNOLOGY
The National College of Technology is a co-educational institution of higher learning, established in 1968. It is situated in the heart of Beirut, and is one of the leading institutions of its kind in the Middle East. The College offers a wide range of courses in engineering, science, and technology. It is seeking applications for the post of Head of the College. The successful candidate will be responsible for the overall management of the College, and will be expected to develop and maintain high standards of achievement. The post is full-time, with a salary of £10,000 per annum, plus pension and other benefits. The successful candidate should have a minimum of 10 years' experience in a similar post, and should be a member of the General Teaching Council for England. Applications should be sent to the Director of Education, Lebanon, in a confidential envelope, and should be accompanied by a curriculum vitae and references. Closing date: 15th June 1980.

YOUTH & COMMUNITY SERVICES

**DIRECTOR
HILLINGDON YOUTH
SPORTS CENTRE
Hayes, Middlesex**

Salary JNC 4(3) £6528 - £7239 p.a. inclusive (under review) plus possible highest qualification allowance of £232 p.a. We are looking for candidates with qualifications and considerable relevant experience in youth work as well as in sport for this senior post at a well-established centre, adjoining a major stadium and pitches, attracting 1200 attendances per week and with membership of 600. Fringe benefits may be payable in approved cases. For an informal discussion, ring Leslie Brotherton, the Principal Officer, on Uxbridge 50497. Application forms and further particulars available from the Personnel Officer, Civic Centre, Uxbridge, Middx. UB8 3JW, telephone Uxbridge 50589, quoting ref. 52619XE. Closing date: 27.6.80.

**Royal County of
BERKSHIRE**

**TEACHER/YOUTH AND
COMMUNITY WORKER**

Theale Green School
£4,590 to £8,495 (pay award pending)
Applications are invited from suitably qualified Teachers and Youth and Community Workers for the above post at this newly built primary school in the heart of Theale. The school is a large, modern building with a wide range of facilities, including a hall, kitchen, and outdoor play area. The successful candidate will be responsible for the teaching and supervision of the school, and will be expected to develop and maintain high standards of achievement. The post is full-time, with a salary of £4,590 to £8,495 per annum, plus pension and other benefits. The successful candidate should have a minimum of 5 years' experience in a similar post, and should be a member of the General Teaching Council for England. Applications should be sent to the Director of Education, Royal County of Berkshire, in a confidential envelope, and should be accompanied by a curriculum vitae and references. Closing date: 27.6.80.

YOUTH AND COMMUNITY TUTOR

Little Heath Comprehensive School
£6,408 to £8,024 (pay award pending)
Applications are invited from suitably qualified men and women for the post of Youth and Community Tutor at this comprehensive school. The successful candidate will be responsible for the supervision and support of the school's youth and community work, and will be expected to develop and maintain high standards of achievement. The post is full-time, with a salary of £6,408 to £8,024 per annum, plus pension and other benefits. The successful candidate should have a minimum of 5 years' experience in a similar post, and should be a member of the General Teaching Council for England. Applications should be sent to the Director of Education, Little Heath, in a confidential envelope, and should be accompanied by a curriculum vitae and references. Closing date: 27.6.80.

BOROUGH OF SOUTH TYNESIDE

Directorate of Education
Youth and Community Services

Community Education Worker

West Park Community Centre, South Shields
£5,031-£5,658

To be responsible for:
(a) Co-ordinating, administering and developing the activities of the West Park Community Association.
(b) Identifying, developing and expanding adult education approaches towards groups, or individuals, with special needs.
This post is funded under the Urban Aid Programme and offers new challenges and opportunities for candidates with previous experience in youth and community work. Salary and conditions in accordance with JNC Report, Scale 3a. Candidates must be qualified in accordance with the requirements of the 12th Report of the JNC for full-time Youth Workers and Community Centre Workers. Application forms and further details may be obtained from the Chief Personnel and Management Services Officer (Ref: 33), Westgate Hall, Westgate Village, South Shields, Tyne and Wear (Tel.: South Shields 552191), and should be returned no later than noon on 23rd June, 1980.

STATES OF JERSEY CIVIL SERVICE

**Principal
Careers Officer
-Education Department**

Salary up to £9,840 per annum (precise figure currently under negotiation)
Applications are invited from persons with not less than five years' experience in the careers service, preferably with a University Degree or Social Science Diploma and/or full-time training. Jersey is a self-governing island with its own legislature for all domestic matters. The Education Service covers a wide range of activities and the Careers and Grants Section is administered by a staff of six people, providing a central careers information and advisory service based at the Education Department and coordinating and guiding the work of careers teachers in the secondary schools and colleges of further education. The post also includes responsibility for the administration of the States of Jersey Grants Scheme. Assistance with removal expenses, temporary housing accommodation and in the purchase of a house, is available to the successful candidate. Application forms and further details about the island and the post may be obtained from Personnel and Management Services, Curzon House, 59/61 Halkett Place, St Helier, Jersey, telephone (0534) 78858. Completed forms should be received by Monday, July 7, 1980.

**DIRECTORATE OF SOCIAL
SERVICES
Child Minder
Organiser**

£6,333-£6,900 p.a. inc.
The successful applicant will be based in the borough's South East Area centred on Dalton and will be responsible for advice on legislation, for continued support of day nurseries and for contributing to the Council's development of day care. We are looking for a good manager with an imaginative approach to the organization of this service. Hackney has a Playbus, a number of Toy Libraries and links with local adult education resources are well established. The organizer will be responsible for planning and running training in co-operation with the training section. We would like applicants to have qualifications in education or nursery nursing and they must have wide experience of working with small children. For further information please telephone Mrs. Hetherington 01-586 3266, extn 331, or Miss Griffiths 01-249 4434, extn 52. Application forms available from Director of Personnel and Secretariat, Town Hall, Mark Street, E8 1EA, or telephone 01-586 9278 (24-hour answering service) quoting reference WE 5047TSE. Closing date for applications is June 30, 1980.

An equal opportunity employer

**BEDFORDSHIRE EDUCATION
SERVICE**

Applications are invited from suitably qualified and experienced candidates for the following post in the Education Department:

**PROFESSIONAL ASSISTANT
(SOUTHERN AREA)**

Salary Scale £6,836-£7,506 (N.J.C. APT.C Scheme Points 31-35)
Applicants should be graduates with teaching experience. This post should be of interest to teachers seeking an initial appointment in LEA administration. The successful applicant will be based in Luton. Essential User Car Allowance, Car Loan Scheme, Approved removal expenses. Application form and further details from D. P. J. Browning, M.A., Chief Education Officer, County Hall, Bedford, or telephone Mr. S. Johnson, Bedford 63222, Ext. 248. Closing date: 19th June 1980.

**Bedfordshire
COUNTY COUNCIL**

**LEEDS CITY COUNCIL
DEPARTMENT OF EDUCATION
CAREERS SERVICE**

**TEMPORARY CAREERS
OFFICER**

AP4 £5,268-£5,784
Applications are invited for the post of Careers Officer (Temporary) to join a team of twelve working with young people who are unemployed or on a range of Special Measures programmes. This is an active team, closely involved in a variety of experimental schemes. Application forms available from the Director of Education, Department of Education, Great George Street, Leeds LS1 3AE. Closing date: 14 days after appearance of this advertisement.

LEEDS

**County of
Cleveland**
Education Department

**Assistant
Education Officer**

(£9,090 to £10,053)

Applications are invited from suitably qualified graduates of a British University with appropriate teaching experience for the above post. The successful applicant will be responsible for the County Education Officer for Primary/Secondary Education for a range of duties relating to the administration of primary education within the County. In approved cases, financial assistance with the removal of household effects will be available. Temporary housing accommodation may be available in approved cases, within the County area. Application forms and further particulars are available from the Education Officer, Cleveland County, Education Office, Woodlands Road, Middlesbrough, Cleveland, TS1 3BN, to whom completed forms should be returned by 30th June, 1980.

Warwickshire

HARTSHILL SCHOOL
Church Road, Hartshill, Nuneaton
(B34 9JL)

Required September 1980. Scale 1 teachers for ENGLISH (interest in Drama), FRENCH, MATHEMATICS, P.E. (GIRLS), RELIGIOUS EDUCATION, and SCIENCE (ability to teach 16+ Chemistry an advantage). Also temporary (one term) teachers for MUSIC and PHYSICS. This is a 12-16 comprehensive school situated in pleasant surroundings between Alvechurch and Nuneaton. We are seeking enthusiastic hard working young teachers to maintain the high standards already set. Applicants are invited from those who believe in sound discipline, a caring attitude and a relationship with pupils that develops from good teaching. Apply by letter to the Head at the School giving the names of two referees (SAE please).

**CATHOLIC EDUCATION COUNCIL
FOR ENGLAND AND WALES**

Applications are invited for the post of

**Deputy
Secretary**

of the Council from practising Catholics with experience in administration or education. The post is tenable from 1 January, 1981 and results from the retirement of the present Assistant Secretary. Salary in the region of that represented by Burnham Group VIII-X Headship. Further information is available from the Secretary of the Council, 41 Cromwell Road, London S.W.7.

THE SPORTS COUNCIL

has a vacancy for an

Information Officer

In its Greater London and South East Regional Office. The successful candidate will be expected to establish and develop an Information Service in the region. A professional qualification in Librarianship or Information Service is required.

Salary scale £4,900 to £6,745 per annum, plus London Weighting of £780 per annum and pension addition.

Further details and application form from: Department 1H, Personnel Unit, The Sports Council, 70 Brompton Road SW3 1EX. Closing date: June 27, 1980.

**ASSISTANT
EDUCATION
OFFICER**

Readvertisement
Salary: PO1 (1): £7,877 to £8,487 per annum including London Weighting (salary award pending). There will be opportunities for planned experience in several areas of educational administration. Flexibility worked. Applicants should be good Honours Graduates with a Postgraduate Certificate in Education and successful teaching experience. Application forms and further particulars available from the Personnel Officer, Civic Centre, Uxbridge, Middlesex, UB8 3JW, telephone Uxbridge 50589 quoting reference E/26/15X. Closing date: 27.6.80.

LONDON BOROUGH OF

HILLINGDON

**NEW ZEALAND COUNCIL
FOR EDUCATIONAL RESEARCH**

**TEST DEVELOPMENT
OFFICER**

This position calls for the appointment of an officer to assist the Council's Test Development Division to prepare new achievement, attitude, vocational, and/or aptitude tests. The successful candidate will be expected to share in a wide range of advisory and consultative work. For copy will be provided for associated personal research. Preference will be given to applicants with advanced degrees (MA or PhD) in psychology who have had some training in test construction, relevant statistical procedures and experimental design. As much of the Division's work involves teachers at all levels of the school system, applicants should also indicate the scope of their experience as teachers. The salary for this position will also be within the range offered to lecturers in New Zealand universities (£7,140 to £10,613). Applicants should send an outline of their academic qualifications, experience, a certificate of good health and two recent photographs to the Director, New Zealand Council for Educational Research, P.O. Box 929, Wellington. Telephone 447-851. Telex 40052. Applications close 28th June 1980.

NOTRE DAME COLLEGE

BEARSDEN
GLASGOW

The Governors invite applications from appropriately qualified and experienced Teachers for the post of

**LECTURER IN
EDUCATIONAL
SCIENCE**

Applicants should be currently involved in school guidance and should have expertise both theoretical and practical in the social psychology of adolescence. The appointment will take effect from 1st October, 1980. The salary scale attached to the post is £4,590 to £9,180 per annum.

Application forms and further information may be obtained from the Principal, to whom completed forms should be returned by Friday, 20th June, 1980.

**County of
Cleveland**
Education Department

Senior Educational Psychologist
£9,012 to £9,310

The successful applicant will be responsible for the Hartlepool Area team, which consists of two psychologists and two social workers and is based at the Burn Valley Centre which is a purpose-built premises shared with the Unit for People with Behavioural Problems and an intensive Remedial Class.

Hartlepool is particularly fortunate in having a wide range of special educational provision, which is sufficiently flexible to cope with the needs of most pupils experiencing difficulties.

In approved cases, financial assistance with the removal of household effects will be available. Temporary housing accommodation may be available in approved cases, within the County Area.

Application forms are available from The County Education Officer, Cleveland County Education Department, Woodlands Road, Middlesbrough, Cleveland TS1 3BN (telephone 0642-248155, extension 3006), to whom completed forms should be returned by June 23, 1980.

**The London Chamber of
Commerce and Industry
Commercial Education
Scheme**

Applications for the following appointments are invited:-

(a) CHIEF EXAMINERS

For single subject examinations.
(1) Elements of Commerce (Elementary Stage).
(2) Geography (Elementary and Intermediate Stages).
(3) Shorthand (Elementary and Higher Stages).
(4) Spanish (All Stages).
(5) Structure of Commerce (Intermediate Stage).
(6) Typewriting (Elementary and Intermediate Stages).

(b) CHIEF EXAMINER

For Private Secretary's Certificate examination.
(1) Communications.

(c) ASSISTANT EXAMINERS

For Secretarial Studies Certificate.
(1) Communications.

(d) ASSISTANT EXAMINERS

For single subject examinations.
(1) Accounting (Higher Stage).
(2) Advertising (Higher Stage).
(3) Book-keeping (Elementary and Intermediate Stages).
(4) Commercial Law (Higher Stage).
(5) Costing (Intermediate and Higher Stages).
(6) Economics (Intermediate and Higher Stages).
(7) Public Relations (Higher Stage).
(8) Shorthand (All Stages).

(e) MODERATORS

For single subject examinations.
(1) Handwriting (Elementary and Intermediate Stages).
(2) Typewriting (All Stages).

These posts are for examinations in 1980/81. Application forms, details of the duties, together with scale of payments may be obtained from: The Assistant Director and Administrative Officer, London Chamber of Commerce and Industry, Commercial Education Scheme, Markens House, Station Road, Sidcup, Kent DA15 7BA. Applications close 28th June, 1980.

